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WASTE MINIMIZATION AND CONTROL ACT OF 1988

HEARINGS

BEFORE THE

SUBCOMMITTEE ON
HAZARDOUS WASTES AND TOXIC SUBSTANCES

OF THE

COMMITTEE ON
ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE

ONE HUNDREDTH CONGRESS

SECOND SESSION

ON

S. 2773

A BILL ENTITLED THE "WASTE MINIMIZATION AND CONTROL ACT OF 1988", TO AMEND THE SOLID WASTE DISPOSAL ACT AND EXTEND THE AUTHORIZATION THROUGH 1992

SEPTEMBER 22 AND 26, 1988

Printed for the use of the Committee on Environment and Public Works

U.S. GOVERNMENT PRINTING OFFICE
89-756 WASHINGTON : 1988

S321-6

For sale by the Superintendent of Documents, Congressional Sales Office
U.S. Government Printing Office, Washington, DC 20402

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WASTE MINIMIZATION AND CONTROL ACT OF 1988

THURSDAY, SEPTEMBER 22, 1988

U.S. Senate
Committee on Environment and Public Works,
Subcommittee on Hazardous Wastes and
Toxic Substances,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:36 a.m., in room 406, Dirksen Senate Office Building, Hon. Max Baucus (chairman of the subcommittee) presiding.

Present: Senators Baucus, Reid, Durenberger, and Chafee.

Also present: Senator Breaux.

OPENING STATEMENT OF HON. MAX BAUCUS, U.S. SENATOR FROM THE STATE OF MONTANA

Senator Baucus. The subcommittee will come to order.

This hearing is the first of two hearings this year on reauthorization of the Resource Conservation and Recovery Act. Today's hearing will focus on legislation which I have introduced, along with Senator Durenberger, to chart a new environmental course for our country.

The problem of solid waste management is a growing one and it represents a major loophole in our Nation's environmental policy. Congress originally focused on solid waste back in 1965, enacting the Solid Waste Disposal Act. At that time solid waste was a rat problem, a garbage problem, a litter problem. Today the Nation's trash heap is growing at a record pace and we simply have no more places to put our throw-aways. Our Nation is the clear leader of the throw-away society. Each American tosses nearly 3.5 pounds of paper, cans, food, and yard wastes every day. That's enough waste to fill a convoy of 10-ton garbage trucks over halfway to the moon. At the rate we're going, by the year 2000 the convoy will be another 30,000 miles longer. Altogether we generate nearly 12 billion tons of solid and hazardous waste each year. Most of our garbage, nearly 85 percent, goes to about 6,000 currently operating municipal landfills. About 10 percent of our garbage is recycled; that may be the largest waste of all. Much of our garbage can be recycled or reused.

Several States—Oregon, Rhode Island, New Jersey—have set up recycling programs to recover 25 percent of their waste, and perhaps more. These programs strive to take full advantage of the paper, glass, and metals that make up nearly two-thirds of our trash by turning this waste into recycled paper, bottles, and cans.

Large-scale recycling is a fact, not fiction. It is happening. I know of at least one company that can take a used aluminum can out of the trash, recycle it, and have it back on the store shelf in less than six weeks.

But we need to do more. Unless we as a Nation begin to recycle more waste and discard less, tomorrow's problem will be one where most of our existing burial sites will be full. We have all heard on television and read in the papers about the garbage crisis that many parts of this country are facing. I, for one, have seen the statistics and believe that the crisis is real. Recent figures indicate that nearly one-third of the Nation's existing municipal landfills will be full in five to seven years; in ten years, nearly 3,000 landfills will be at capacity. In some parts of the country, especially the eastern States, the problem is a crisis. In Connecticut, all landfill capacity will be used in less than two years. In New York, 18 landfills have closed; none have opened. New Jersey had about 100 landfills during the 1970's; last year they were down to 11, with only one new landfill in the State.

While the problem is most severe in the east, it is an issue in almost every State. Illinois will run out of landfill space by 1993. Los Angeles expects to run out of capacity in five to six years. Even rural States, like my home State of Montana, have a landfill capacity problem. Butte and Helena are in need of new landfill capacity right now, and Bozeman isn't far behind.

But today's waste problem is more than just finding room to dump our trash. We're not managing our waste as safely as we should, and as a result we have witnessed some very disturbing and frightening scenes. We have seen hypodermic needles and vials of contaminated blood floating in the sea or washing up on our beaches, and we have seen our Nation's most toxic waste shipped overseas to poison the soil and people of foreign lands. We have seen a steady polluting of our precious groundwater at older landfills from chemicals and leaking methane gas.

Over 184 municipal landfills are so dangerous that they have been designated as Superfund sites. In a report published just two months ago, EPA listed another 163 landfills with health and environmental hazards. In one community in Wisconsin the groundwater was so polluted by its landfill that the community had to shut down its wells and provide its residents with fresh water. In Iowa, a landfill wiped out over 136 million cubic feet of groundwater, an area almost one mile wide, 670 feet long, and 40 feet deep.

Finally, we continue to hear people from coast to coast screaming, "not in my back yard." Those screams, coming from community groups, have slowed down and even blocked the siting of new municipal landfills and incinerators in many communities. It's a fact that during the past decade, two-thirds of the landfills have closed—over 12,000—but fewer than 1,000 new landfills have opened. This downward trend is continuing. In 1970 almost 400 new landfills were opened, but in 1985 only 57 were opened. And while 140 municipal incinerators are currently operating, over 200 planned municipal incinerators have yet to find an acceptable location.

Unfortunately, we are generating more and more trash, up nearly 30 percent since 1970. As a result, many communities are unable to site new facilities. They are forced to send their waste to older, leaking landfills or ship their waste on barges that wander our coastal waters, looking for a place to dump their loads.

This brings us to the subject of today's hearing, how best to tackle these problems. I have introduced a comprehensive bill to take on these issues. The bill is a first step in a process to reduce, to recycle, and to better manage our waste. The bill charts a new course of action. It will set, for the first time, standards for reducing and recycling waste. It will set minimum standards to ensure that the waste we produce is properly and safely managed, and it will provide tools and resources to the States to help them achieve our goals.

Americans must begin to tackle their waste problems. In my opinion, the question is not whether Congress should enact legislation; rather, it's a question of how best to meet this goal. Are there viable alternatives that will achieve similar or better environmental results than those set forth in this bill? Are there enforcement alternatives or other mechanisms that will ensure compliance with the legislation? And what alternative permit financing mechanisms are available to support the legislation? And how can we avoid reliving the past eight years of EPA's failure to act, and assure that mandatory and permissive authority in the legislation will in fact be implemented? Those are some of the basic questions we will address in this hearing and the one next week.

I thank our witnesses for coming this morning and sharing their expertise with this committee. I look forward to their views as we try to solve this problem.

I note that Senator Reid of Nevada is here this morning, a very faithful member of this committee.

Senator, we are glad to have you here. Do you have a statement?

OPENING STATEMENT OF HON. HARRY REID, U.S. SENATOR FROM THE STATE OF NEVADA

Senator Reid. Thank you very much, Mr. Chairman. I congratulate you on your work in this general field, and certainly on this legislation.

As we know, waste is an unfortunate fact of life, and I think you have outlined, in detail, the grim picture that this Nation faces from the garbage problem. It is best exemplified, I am sure, by the wandering garbage barge problem that we had last year.

In Nevada we have a problem that is somewhat similar to that of Montana. One thinks that because we have such wide open spaces, there are a lot of places to put garbage. The fact of the matter is that in the State of Nevada, 87 percent of the land is owned by the Federal Government and it's becoming almost impossible to make arrangements with the Federal Government to obtain land for disposal purposes. A lot of that relates to who is liable if in fact something goes wrong with some environmental problem in the future, and it's becoming most difficult. In the rapidly growing area of Las Vegas, for example, their solid waste disposal area is about to run out and we have been unable to find a place for them to move to.

Mr. Chairman, another problem that we have in Nevada is that of mining waste, particularly in the mining and processing of gold. The bill's treatment of this is of particular interest to me and my constituents. Mining wastes are currently in a state of regulatory limbo. Under S. 2773, mining wastes are defined as solid wastes to be regulated under subtitle (D). Minimum design and operation guidelines must be established for facilities that manage materials generated from mining activities. The regulation shall require the application of best available control technology, determined by the State on a site-specific basis, to ensure protection of human health and the environment.

Mining, particularly gold mining, is a vital and essential industry in Nevada. The numbers are telling. In 1986, Nevada produced 56 percent of this Nation's gold, comprising almost 5 percent of the world's total gold production.

I have spoken to staff and to the Chairman, and I appreciate your concern and recognition of this being a problem area. I welcome the opportunity to participate as the subcommittee deliberates the critical solid waste disposal issues before us, and I would ask permission that my full statement be made a part of the record.

Senator BAUCUS. Without objection, it will be included.

[Senator Reid's statement follows:]

OPENING STATEMENT OF HON. HARRY REID, U.S. SENATOR FROM THE STATE OF NEVADA

Mr. Chairman, thank you for holding this hearing today on the reauthorization of the Resource Conservation and Recovery Act (RCRA)—the nation's main law governing hazardous and nonhazardous solid waste. The Subcommittee will focus on S. 2773, the Waste Minimization and Control Act, which you and Senator Durenberger introduced on September 9.

The question of waste disposal is one of the more pressing issues before Congress. Waste, unfortunately, is a fact of life. We each produce about a ton of household waste per year. EPA estimates that by the year 2000, the U.S. will be discarding 158 million tons of municipal solid waste per year, up from 133 million tons in 1984. The saga of the Islip, New York wandering garbage barge and the closure of New Jersey beaches because of washed-up garbage highlight the fact that there is a critical problem.

Concerned citizens and local government officials in Nevada have contacted my office on several occasions about various waste disposal problems. In Nevada, the landfill situation is particularly acute. More than 85 percent of Nevada is controlled by the Federal Government. Many communities in the state are surrounded by federally owned lands and have no place to dispose of their solid waste; nor can these communities afford to pay fair market-value for acreage to use for waste disposal.

Hazardous waste—wastes that pose a substantial or potential hazard to human health or the environment—is also a big problem growing bigger. A decade ago, headlines focused on an industrial dump called Love Canal. EPA has received reports of 27,000 similar sites that could prove hazardous.

Congress has focused on the question of solid waste disposal since the 1960's. The Solid Waste Disposal Act, passed in 1965, provided local governments with financial and technical assistance to deal with increasing trash. Increased environmental awareness led to the passage in 1976 of the Resource Conservation and Recovery Act (RCRA). RCRA focused on the need to minimize waste and recycle to recover the hidden resources in material that has been thrown away.

The Waste Minimization and Control Act of 1988 expands on this theme and seeks to reduce, recycle and better manage the more than 12 billion tons of solid and hazardous waste we generate in this country every year. The bill sets up a system for tracking the movement of non-hazardous solid waste that is similar to the current system in RCRA for tracking hazardous waste. Of great benefit is the bill's focus on waste reduction and recycling by establishing an office of waste reduction and recycling and providing the technical and financial assistance to the states in these areas.

I should mention that the bill's treatment of mining wastes, particularly in the mining and processing of gold, is of particular interest to me and to my constituents. Mining wastes are currently in a state of regulatory limbo. Under S. 2773, mining wastes are defined as solid wastes, to be regulated under Subtitle D. Minimum design and operation guidelines must be established for facilities that manage materials generated from mining activities. The regulations shall require the application of the best available control technology determined by the State on a site-specific basis to ensure protection of human health and the environment.

Mining, particularly gold mining, is a vital essential industry in Nevada. The numbers are telling. In 1986, Nevada produced 56% of the Nation's gold; comprising 4% of the world's total gold production.

I welcome the opportunity to participate as the Subcommittee deliberates the critical solid waste disposal issues before us. Thank you.

Senator **BAUCUS**. I would also like to mention that a statement from Senator Lautenberg will be placed in the record. He had planned to attend this subcommittee hearing but his plane was delayed and he is not able to be here at this moment. He may come in a little later.

We also have a statement from Senator Biden for the record.

[The statements referred to follows:]

OPENING STATEMENT OF HON. FRANK R. LAUTENBERG, U.S. SENATOR FROM THE STATE OF NEW JERSEY

Mr. Chairman, I commend you for calling today's hearing.

The nation is facing a solid and hazardous waste crisis. Today, we dispose 80 percent of the 160 million tons of municipal solid waste we generate each year in landfills. But one-third of all landfills in the U.S. will be full by 1994. The declining number of landfills has caused communities to transport their wastes greater distances for disposal and has increased the cost of Disposal. Over half of New Jersey's solid waste is sent to out-of-state landfills for disposal. And there are environmental concerns about landfill disposal and incineration which need to be addressed.

In 1981, the Reagan Administration cut off Federal grants to states to manage their solid wastes. Today's crisis is in part the result of this short-sighted action.

But we can address this crisis. For example, last year New Jersey became the first state in the nation to establish a mandatory law to recycle at least 25 percent of its waste. We need to reverse the Reagan Administration's Lack of effort and follow the lead of states like New Jersey to increase recycling. In addition EPA must estabish state-of-the-art standards for landfills and incinerators to protect human health and the environment.

The U.S. also generates hundreds of millions of tons of hazardous waste annually. Some of these wastes have been disposed of improperly and now are found in Superfund and potential Superfund sites. But there are significant opportunities for industry to reduce its waste generation at the source through changes in production operations and raw materials use.

Following up on recommendations made by the Office of Technology Assessment, I introduced legislation, S. 1429, the Hazardous Waste Reduction Act, to establish a nonregulatory approach to reduce the generation of wastes in the U.S. According to OTA, EPA has spent virtually no funds to encourage waste reduction. Just recently, EPA announced some steps it was taking to address hazardous waste reduction. But we must ensure that EPA reverses its past policies and places a high priority on hazardous waste reduction.

Mr. Chairman, the hearings you have scheduled will provide us with the information we need to address our solid and hazardous waste crisis. Your legislation, S. 2773, contains a number of constructive programs to respond to the crisis. I look forward to working with you in addressing these problems.

STATEMENT OF HON. JOSEPH R. BIDEN, U.S. SENATOR FROM THE STATE OF DELAWARE

REDUCTION OF HAZARDOUS WASTES

Mr. Chairman, I appreciate the opportunity to testify before your Subcommittee's hearing on S. 2773, the Waste Minimization and Control Act. My comments will center on Title III, which establishes a national waste reduction and recycling program.

Federal efforts toward controlling hazardous wastes have most commonly consisted of increasingly tough "end-of-pipe" regulations. When environmental damage was traced to a factory or industry, the response has traditionally been to tighten up standards for disposal or release of the offending chemical.

Our nation's water, air and soil have been protected to a degree through this approach, but time has shown that even the best scrubber, incinerator or treatment system can and do fail to eliminate the problem. Too often the pollutants are just shifted to another medium. And there is no denying that the costs of this approach have reached dizzying heights. One estimate is that over $60 billion is spent each year by industry and individuals in efforts to meet regulatory requirements.

Despite the share of this enormous expenditure that is devoted to hazardous wastes, they remain a problem that escape solution. End-of-pipe regulation has failed to slow the growth of hazardous wastes. The Congressional Office of Technology Assessment has estimated that over 550 million tons of hazardous wastes are generated annually in the United States. Federal laws require companies to be more careful how they handle their wastes, but too little has been done to move them toward the next step—preventing the generation of the waste in the first place.

But Federal efforts to internalize the cost of pollution for companies has worked in one area—there is now increasing attention paid to escaping those costs through elimination of the waste at the source. What was once a largely theoretical but little used waste management technique has come into its own as companies search for ways to escape increasing waste disposal costs.

Slowly and quietly, the case is being made that reduction at the source is practical, economically-attractive approach. The Environmental Protection Agency, the Office of Technology Assessment, and the National Research Council have all studied waste reduction and embraced it. Just this week, the Science Advisory Board of the EPA released its recommendations for a long-range research and development strategy. Its top recommendation was for EPA to shift its focus "from end-of-pipe controls to preventing the generation of pollution."

Pioneering state programs in waste reduction have found major opportunities for savings in factories of all sizes. Companies that have undertaken their own, in-house efforts have documented tremendous cuts in their wastes streams, completely eliminating them in some cases.

A landmark study by an environmental research organization, INFORM, looked at waste reduction in 29 large organic chemical plants in New Jersey, Ohio and California. On the plus side, the study found that waste reduction practices, when applied, were able to cut waste reduction practices, when applied, were able to cut waste streams between 80 and 100 percent in one-quarter of the cases. However, on the minus side, the companies only looked at a minute fraction of the wastes they generated for these savings. A national program will help get companies to review all their waste streams.

Without citing the numerous case studies available, suffice it to say that efforts to date have shown unmistakably that waste reduction will make a significant dent in our nation's generation of hazardous waste. A major study by EPA found a 33 percent cut possible. OTA expects a 50 percent reduction if more attention is given to preventing pollution at the source.

The choice before us is whether to allow those efforts to continue on under their own momentum—and no one is denying that they will continue, although at a slow pace—or to provide a responsible Federal program to accelerate the adoption of waste reduction practices and technologies by industry.

Federal direction and support is crucial. We need to help states with additional resources to establish waste reduction programs or expand existing ones. We need to take advantage of the unique position of the federal government to avoid unnecessary duplication of effort by individual states. In some cases, we need to provide states with additional muscle to move laggards along.

But in developing the Federal component, we need to make sure that we do not fall back into old habits that will only lead to conflict, stalemate and misdirection of resources. If there is one characteristic that has brought waste reduction this far, it is that every one wins with its use. Companies have lower production costs, the public gains a reduced risk from industrial chemicals and wastes and the environment is not threatened by unsound disposal practices.

That is a strong foundation to build the federal effort on and one that we weaken only to our own detriment.

Mr. Chairman. I read with interest your comments on waste reduction before the National Solid Waste Management Association. I share your belief that we must avoid a "heavy hand" from Washington. The problems and characteristics of individual waste streams are simply too diverse for specific standards to be set at the federal level. I also agree with your point that one of our goals should be to provide states with the tools and resources to develop their programs and experiment with approaches best geared to their circumstances.

There are two goals we should aim for in a federal program in support of waste reduction. First, we should provide states with the the resources to go into individual factories. Expanded support for states technical assistance programs is the most important component of making trained personnel available for in-plant surveys and assistance.

To illustrate, my own state of Delaware recently applied for a grant from EPA to establish a waste reduction program. Ten grants were available. Mr. Chairman, 38 States applied for those grants. Over three-quarters of the States are interested in pursuing a waste reduction program, but there is still no clear commitment to it. Enactment of a strong waste reduction program is needed to signal the Federal Government's intention to give greater priority to waste reduction and to stay with it over the long-term.

Second, we should provide those State programs the resources to get the attention of the management in those factories. I believe clarification or modification of some sections of existing law will be a major step in fortifying the position of state programs.

One step would be to make it clearer that state waste reduction programs will have an important role in any discharge permit application or renewal. This will strengthen our nation's commitment to placing waste reduction at the top of waste management hierarchy. As you know, discharge permits under various Federal laws are good for a limited number of years. At the time of renewal, State waste reduction programs should have the authority to review a plant's operation to determine what changes can or should be made to out waste discharge or emissions from the plant.

Another step in support of getting management's attention is to allow State review of a plant's operations in the event that facility is found to be out of compliance with its existing discharge permit. I note that under existing law, the Administrator already has the authority to revoke a RCRA permit for noncompliance, in addition to the rather open-ended authority to review and modify a permit at any time during its term. Similar authorities exist under the Clean Water Act and should be extended to all environmental laws requiring discharge permits.

In addition, I recommend expanding that authority, under conditions of non-compliance, to allow a review of plant operations and their discharges covered under different permits. If a plant cannot operate under its previously agreed to limits in one area, there is sufficient reason for concern that there may be problems in other areas of the plant as well. This proposal also squares with the multi-media emphasis you have called for in the Office of Waste Minimization.

I would also emphasize that the extended authority to review discharge permits should be used at the state's discretion. The state should have the flexibility to devote its resources, which even with additional federal help will remain limited, to factories that demand attention because of their size, location, emissions or other factor.

Preset standards should not come down from Washington which direct a certain percentage reduction in waste. That should be left largely to the State waste reduction expert who is on the scene and most familiar with the specific characteristics of the process in question. The technical assistance expert, based on experience, should be the one to decide if a 10 percent cut is proper or a 100 percent cut.

Standards also may send the mistaken signal that emissions are still to be considered a normal part of doing business. A change in thinking is needed here. Industrial wastes represent an imperfect manufacturing process and should only grudgingly be allowed by the public. They should not be viewed an inevitable result of an industrial process.

Mr. Chairman, my comments have concentrated on providing the tools that will help state waste reduction experts get into the factory. Obviously, the organization of federal efforts must compliment state efforts. I am pleased to see you have also included several provisions in title III which I called for in legislation I introduced last year and which you cosponsored, S. 1331.

A separate Office of Waste Reduction within EPA is an absolute necessity for breaking out of the traditional "end-of-pipe" approach to pollution control. An information clearinghouse at the federal level will reduce duplication of effort among states, and allow as shift of resources to the role states are best suited toward—in-plant assistance.

Reduction of waste at the source has been given too little consideration and emphasis as the preferred management technique in pollution control. The Waste Minimization and Control Act shows that will not be the case for long. This is an important change in our approach to pollution control, and one that should be enacted as quickly as possible. I look forward to working with you and other members of the Subcommittee on the proper federal role in this area in the months ahead.

Senator BAUCUS. I'd like to ask Senator Breaux if he has a statement. Senator Breaux is not a member of this subcommittee but he certainly is a very able and talented member of the full committee who has taken a very deep interest in the issues of this subcommittee as well as other subcommittees.

Senator Breaux?

OPENING STATEMENT OF HON. JOHN B. BREAUX, U.S. SENATOR FROM THE STATE OF LOUISIANA

Senator BREAUX. Thank you very much, Mr. Chairman. I am pleased to be able to sit in and listen to your witnesses. I congratulate you for your continued effort in trying to get a bill dealing with solid waste that's acceptable to this committee and one that's acceptable to the needs of the Nation.

It's very clear that everyone wants to do something about solid waste, but generally everybody wants to do it somewhere else. We are rapidly running out of "somewhere elses." I note with a great deal of concern that some States point out with pride that they haven't issued any waste permits in the last six or eight months. To me, that's a source of grave concern because if they aren't issuing permits, what the heck are they doing with the waste that is still being generated at an increasingly alarming level? And yet we are granting permits at an increasingly lower level with fewer and fewer areas being willing to accept any kind of solid waste at all. So it's a very critical problem, one of the things that we really need to move on as quickly as we can in the next Congress and hopefully come up with some innovative ideas, perhaps even some kind of incentives to encourage States and cities and local communities to be willing to accept waste in defined areas that may be suitable for doing so, even if we have to provide some encouragement to do that. We cannot continue to have local communities bow to local pressure and refuse to ever permit anything.

I know there are about 38 States that have programs within their own jurisdictions now, but I look with alarm at their inability to grant permits to get anything done.

I note also, Mr. Chairman, that this bill—at least at this stage—does not deal with hazardous waste reauthorization, which of course is part of RCRA, which I know we'll have to get into in the next Congress. We have touched on the hazardous waste question which is very, important; my own State handles a great deal of hazardous waste, some of it in a very slipshod way, and it's of great concern. I'm particularly concerned about some of the apparent loopholes in the existing bill which will apparently, somehow, allow companies which are burning huge amounts of hazardous waste to somehow get out of being regulated as a hazardous waste incinerator under some kind of ridiculous thought that they are recyclers instead of hazardous waste incinerators. I think that makes no sense at all. If in fact that is because of a loophole in the law, Mr. Chairman, I think it's something that we very clearly have to address in this Congress or certainly in the next Congress. I think everybody on the committee would at least agree that it matters not what comes out of the end of the incinerating; it's what goes in and is burned within the contents of that piece of equipment that should be regulated. Hazardous wastes go into the incinerator and, in fact, are burned; it matters not that gold bars come out the other end. It should be regulated as a hazardous waste incinerator and hopefully we can address that problem also.

Senator BAUCUS. Thank you, Senator.

Our first panel is Cathy Reynolds, Councilwoman from Denver, Colorado, and Mr. Thomas Jorling, Commissioner of the New York Department of Environmental Conservation.

We appreciate your attendance. It is important for us to hear your views. Ms. Reynolds, as an elected official of the city of Denver, Colorado, and also Mr. Jorling, who is a pioneer in this area, certainly in the State of New York. We very much look forward to your views.

Ms. Reynolds, why don't you begin?

STATEMENT OF CATHY REYNOLDS, MEMBER, DENVER CITY COUNCIL, REPRESENTING THE NATIONAL LEAGUE OF CITIES

Ms. REYNOLDS. Thank you very much, Mr. Chairman, members of the subcommittee. My name is Cathy Reynolds; I am a Council Member at Large in Denver, Colorado. I am also immediate past president of the National League of Cities.

I am here today to testify on behalf of NLC and our more than 15,000 member cities and towns across the country on the proposed legislation entitled The Waste Minimization and Control Act of 1988.

Increasingly, our cities are finding it more and more difficult—as you gentlemen have already paid—to deal appropriately and effectively with this most basic municipal service.

First I'd like to take this opportunity to express our deep concern about retroactive provisions in the House Technical Corrections Bill which have already interfered with financing of environmental and infrastructure facilities in some 25 States and directly contradict the intent of this committee in setting up State revolving loan funds under the Clean Water Act.

Mr. Chairman, we appreciate your leadership as acting chairman of the Senate Finance Committee in not including such a provision in the Senate bill or amendment. Yet, as long as the House provision is pending, it has the effect of law, interfering directly with public programs and services under the primary jurisdiction of this committee.

I hope—we hope—that the Senate will send an unmistakable message to the House that retroactive interference into long-standing State and municipal programs for cleanup and/or public infrastructure is simply unacceptable.

While appropriate concerns have been raised about the implications of various strategies available to dispose of solid waste, pushing municipalities to the point where they will be unable to cope at all with trash disposal has enormous implications that will pose the ultimate threat to human health and the environment.

On behalf of the Nation's municipal officials we are pleased to note the new-found interest on the part of the Federal Government in one of the most pressing and controversial local issues we elected officials confront every day, disposing of solid waste. You are to be commended again, Mr. Chairman, for the positive steps you have taken with your pending proposal to deal with those issues.

First, source reduction can only be accomplished with the full participation of the Federal Government. While local government can have limited impact on reducing the amount of waste in a given community, we have little if any control over products that come into our community, and we certainly have no authority to mandate the contents of manufactured products, even if they are manufactured within our boundaries. Federal leadership must be exercised in establishing packaging standards for manufacturers, distributors and retailers, and in removing or at least reducing from the waste stream packaging and products which are toxic, not recyclable, or not biodegradable.

Second, Federal participation in encouraging recycling by creating markets for such products is also essential to the success of the nationwide recycling program. Many municipalities in several States have already taken the initiative in implementing and encouraging recycling to reduce the waste stream, but without adequate markets for these products we will merely be warehousing products for which there is no use.

We do not, however, believe that the Congress should impose a percent recycling mandate. Every community is different, and what one community can accomplish with little effort another may be altogether incapable of doing. You know and I know that there are parts of some cities where garbage isn't even put in bags or cans yet. Twenty-five percent recycling isn't going to happen in these communities in the short term. If the differences among communities are respected, and each is encouraged to accomplish national goals, we believe we will all be far more successful than if you establish a mandate that cannot be met.

Third, NLC believes Congress should establish appropriate requirements for both air emissions from municipal incinerators and for ash disposal to assist us in assuring that our citizens are protected in waste reduction activities.

Municipalities across the country are attempting to deal with their own particular solid waste disposal crises by investing substantial local resources in the construction of incinerators and ash disposal facilities. We cannot afford—either from the financial perspective or, more importantly, from the perspective of assuring our citizens that these necessary facilities are safe—to find these investments inadequate after the fact of investment. We need to know ahead of time what standards and criteria must be included in these facilities both to protect the public health and safety and to enable municipalities to site and build such facilities appropriately.

Standards and criteria for municipal incinerators must, however, be rational and must reflect what can actually be accomplished.

We must also be given adequate time to comply with new incinerator or other solid waste disposal requirements. It should be recognized that existing municipal solid waste disposal practices cannot be changed overnight. When developing retrofit or closure mandates, you must keep in mind that we have garbage every day and that we must do something with it in the interim. Suggesting that we take it to an existing facility that meets the new criteria during the interim is not necessarily a viable option. Even if there is an existing facility that meets Federal criteria in another political subdivision, we cannot assume they will be willing to take another local government's waste, even for the short term.

Cities are keenly aware of potential liability concerns. Many cities will be reluctant to transport their wastes outside of their boundaries because of the ever-present threat of future designation as the principal responsible party should that facility at some point be designated a Superfund site.

Pleased as we are with the Federal Government's new interest in solid waste, we think it necessary to recognize that solid waste disposal is uniquely a local government responsibility. For Federal efforts to be successful, it is essential that you involve local officials in significant and meaningful ways at every step of the process.

In developing environmental legislation Congress must approach municipalities from a more positive perspective than the case has been so far. We perceive that the Congressional attitude toward municipalities, based on what we see in this and other environmental legislation, is that we must somehow be coerced into compliance with Federal environmental laws. This attitude does not always recognize that the cities, unlike the private sector, are entities in perpetuity. We don't pick up and move somewhere else if things get too messy. Please understand that we really do care about our communities.

The legislation pending before you, while citing as an objective the establishment of partnerships, stops at the State level and makes no mention of local government as an equally essential part of that partnership to ensure waste management capacity.

The proposed legislation provides no role for local officials in the development of regulations, and I would commend to your attention and recommend the inclusion of such language in the bill.

While it is clear that many municipalities are confronting a crisis and need assistance from their sister levels of government, to set up a confrontational structure can only lead to failure. Planning for solid waste management will be effective only if local governments have a voice in and the ability to impact the planning process. At a minimum, to be acceptable, State solid waste management plans must demonstrate that local government officials have been involved in their development.

Much of the innovation in this country comes from the local level, and that creativity can be accessed best if we have a role in developing what can and should be done. There must also be recognition of the differences across the Nation in demography, climate, geography and hydrology, and that the proverbial one size, in this case, does not fit all.

Another concern with the proposed bill is its penalty provisions. We believe it makes more sense to target financial penalties assessed on local governments to the use of dedicated environmental purpose funds, administered either by the State or by EPA. Again, I will cite the House proposals, H.R. 4357 and H.R. 4902, which have acceptable and sensible penalty provisions.

Mr. Chairman, we very much appreciate the opportunity to present NLC's views before your committee. I would like to request that the proposed policy recommended by our Energy, Environment, and Natural Resources Steering Committee on solid waste be included for the record. I would also like to assure you that we are more than willing to continue to work closely with you and your staff in assuring the development and enactment of workable and productive solid waste management legislation.

We will be very pleased to answer any questions, and I thank you.

Senator BAUCUS. Thank you very much, Ms. Reynolds.

Mr. Jorling, we are very honored to have you back before us. You have been before this committee a number of times; you've done a good job before, so that's why we asked you back. Why don't you proceed?

STATEMENT OF THOMAS JORLING, COMMISSIONER, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Mr. JORLING. Thank you, Mr. Chairman. It is a pleasure to be here again before the committee, and especially a pleasure to be here with now-Senator Breaux. My last encounters as a public official with then-Congressman Breaux were in the waning days of 1980, and I can assure you and others that he played an instrumental role in the enactment of Superfund in those crucial last hours, so it is a pleasure to be here.

Among the various responsibilities of my department is the regulation of solid waste management facilities in New York State. In fact, in my first summer on the job, last summer, I confronted the infamous MOBRO barge that had completed a tour of the Caribbean, and spent this summer dealing with the beach wash-ups along Long Island and New York City beaches. I am not looking forward to next summer.

I appreciate your having invited the State of New York, with its years of extensive experience, to review your bill, Mr. Chairman, the proposed Waste Minimization and Control Act of 1988.

Without argument, the proper management of solid waste is necessary to protect the public health and welfare of the Nation's citizenry and the environment. Toward this end, it is necessary to reduce the generation of solid waste, to accelerate the recovery and reuse of secondary materials found in the Nation's waste stream, to encourage the conservation of resources, to foster public and private initiatives to achieve those ends, and to encourage a new ethic among the Nation's governments and citizenry to conserve and reuse, rather than discard, useful materials. Simply put, we must make a transformation from the throwaway society we became over generations to a conserving recycling society, if we are to have a sustainable future.

As evidenced by the enactment of the Resource Conservation and Recovery Act of 1976, Congress has already laid the necessary foundation for attaining these objectives. What is now needed is a refinement of what Congress has initiated and the development and enhancement of the Federal- State partnership so very much needed if the effort is to succeed.

The proposed Waste Minimization and Control Act of 1988, presently under consideration, constitutes a major step in the right direction toward providing that refinement and enhancement. You are to be commended for the leadership that this bill represents.

Mr. Chairman, my prepared text is extensive and I am going to excerpt from it, so I ask that it be made part of the record.

Senator BAUCUS. Without objection.

Mr. JORLING. The philosophy behind your bill and many of the points in your bill, Mr. Chairman, are already embodied in the law, policy, and regulation of my State. I have enumerated many of those provisions in my prepared text. I would specifically mention that the solid waste management hierarchy is the same, the planning programs are the same, and the environmentally protective guidelines are the same, so we are reassured that we are moving in the right direction and we welcome the support your bill would bring to putting a floor under New York State's program so as not to put any of our economic entities at a disadvantage because an adjacent State might take a less protective view of its own environment.

So you have introduced a landmark bill, Mr. Chairman. We will work hard with you to achieve its enactment. After eight years of a Federal Administration that had basically abandoned leadership in environmental protection, your bill is distinctly a breath of fresh air.

There are a number of areas in the bill that we will identify for additional modification and change, and I would point out a couple of those this morning.

The first has to do with my experiences this summer and it has to do with the definition of infectious waste and medical waste. The terms are often used interchangeably and that can cause confusion. We have the same circumstance in the State of New York.

I think it's appropriate that the term of reference to define a regulatory and management program be the term "medical waste." In explanation, let me expand on our experience of this summer.

The wash-ups of medical-type waste on Long Island and New York City beaches revealed a gap in our regulatory program. As we undertook our response we were constrained to work within existing authority, and that authority has its roots in the public health law enacted primarily at the turn of the century. Specifically, it established the authority to regulate infectious waste. Infectious waste is referred to generally as that material which results from the treatment of patients on isolation. Isolation or quarantine used to be a very common medical practice in the past. However, it is no longer as common, and use as the term restricts the universe of waste material to a relatively small portion of medical-type waste. Under this definition, once the material has left the isolation chamber, it is no longer classified as infectious waste. Under the emergency regulations which we issued this summer, which I would like to make a part of the record, we included a manifest system. It covers medical-type waste, but it is restricted by and large to that category of medical-type waste that is actually infectious.

Now, what I have done is to bring some examples of the material that did wash up on the beaches this summer, and I do so to make this point. Incidentally, Mr. Chairman, we treated the material as it washed up as evidence, basically, because it was there unlawfully; we considered it to be evidence and we undertook custody and control measures of it like that. However, if you take just a representative sample of the material that washed up on the beaches, it is medical-type debris, but it is unlikely that much of this medical-type debris came from patients on isolation. So we have a situation in which many of the materials which washed up would not likely have been regulated in our system under present law, and they would be unregulated under the system that is proposed in your bill.

It is true that if we expand the definition beyond infectious waste to include medical waste, it will expand the universe of material, but it will raise costs. We have a proposed definition that we estimate will increase the amount of regulated material from an average hospital from about 20 percent of the total materials that flow from hospitals to between 70 and 80 percent, but we think that it's not only in the interest of the health care providers but also in the interest of the public to have a better definition of medical waste.

Both Commissioner David Axelrod, New York's Commissioner of Health, and I agree that we need to revise our own definitions to recognize modern realities. The law must define a universe of medical waste that should be specifically managed under a regulatory framework that is coherent and enforceable. In order to do that, we believe that a new definition of medical waste is necessary. While such a definition will enlarge the category of waste that is regulated, as I pointed out, we believe it important for the public and for the protection of health.

We would therefore recommend that the term "medical waste" be defined as follows:

> Any waste material resulting from (a), the administration of medical care to a patient by a health care provider, or (b), the analysis of body tissue or fluids by a laboratory facility.

The definition is obviously a starting point. It needs further refinement and work. The basic point, Mr. Chairman, which I think is emphasized by the materials we brought in, is that we need a better definition of medical waste for the purposes of regulation and management.

One aspect of the bill, without further qualification, would present some problems. The requirements for disposal of medical waste are generally very good but limit disposal by incineration to controlled air, multi-chambered incinerators. I feel that incineration of medical waste in adequately regulated municipal waste incineration units is a viable and appropriate means for disposing of these wastes. I am referring here not to the types of instruments that were characteristic of the past, but waste incineration facilities that would be subject, for instance, to our new regulations. These are very highly regulated units indeed.

The standards contained in the bill would preclude the use of municipal waste incineration units. My department's experience this year with medical waste indicates that adequate mechanisms must be provided now for acceptable disposal to prevent further incidents of this nature. Therefore, I believe that the proper use of existing municipal units for the purpose of incinerating medical waste should be provided for, and in support of this I would like to make available for you a report of our Commissioner of Health on infectious waste from this summer, dated August, 1988, in which he places as the most preferred method of disposal of medical waste the incineration at waste energy facilities that are in compliance with the high standards.

One other point bears on the Federal-State relationship. I think it's one on which I can speak for almost all my colleagues throughout the country. It is the role assistance to the States from the Federal Government. We support such assistance, but we are also leery of repeating our experience with many other Federal assistance programs which are underfunded but subject the States to Federal reporting and supervisory requirements that are far in excess of the resources necessary to implement them.

Let me touch on one other provision that I think is especially important in your proposal. Section 308 is a very creative provision. It would provide an alternative mechanism by which toxic constituents of solid waste could be significantly reduced or even eliminated. What is not clearly addressed, though, is the relationship of this provision to the provisions of the Toxic Substances Control Act. This should be done in order to clarify how these two would relate. Most emphatically, the provision that would be incorporated into this legislation should not carry forward the basic TSCA directive to regulate only where there is "an unreasonable risk to health and the environment." Such an authorization limits regulatory discretion to determinations about impact on the environment and health that are impossible to predict. The directive to the Administrator should be that if there is a component of a product which has inherent toxic characteristics, that product should be regulated to remove that toxic component where there other substitutes available. In addition, EPA should have the authority, as called for in the bill, to regulate the management and disposal of products that contain toxic materials to prevent health and environmental risks from the disposal of that product.

The lesson of the last 20 years' experience with protection of health and the environment is that preventive measures are the most cost-effective. There was an article today in the Washington Post about a report coming out of EPA that makes the same point. Waiting until something has been released into the environment, and after many—often millions upon millions—pounds have been produced, is simply foolhardy. We need to apply our knowledge and our wisdom to prevent materials from being released to the environment. This provision of your bill is potentially the most significant provision, and we strongly support it.

Mr. Chairman, since the red light has gone on I will close and will say that I certainly will be happy to make my staff available to work with you in understanding the specific recommendations that we have made for change.

In closing, I would like to make a part of the record, in addition to the materials already referred to, the regulatory body that we now have in place in New York governing all solid waste management and incineration, air emissions, ash disposal, recycling, the whole gamut, as part of your record to help you fashion this bill.

With that, Mr. Chairman, I will be happy to respond to questions.

Senator **Baucus**. Thank you very much, Mr. Jorling.

One of the tensions in any Federal-State-local regulation is the degree to which Uncle Sam should provide the standards and state the provisions which an entity must follow; the degree to which the State determines those; and, of course, the degree to which local government does.

Ms. Reynolds, as a local government official you are obviously ably representing the local government point of view, to assure that either a Federal requirement and/or a State requirement doesn't adversely affect a city in some way, say the city of Denver.

I am wondering if the two of you could enter into a little discussion here with me as to how the bill could perhaps be changed or strengthened to protect the local government point of view, but in a way that doesn't unreasonably or unnecessarily interfere with the State plan. The construct and theory of this bill essentially is that solid waste disposal and standards should be set according to a State plan; that is, different States are different. The bill does provide for Federal minimums, but essentially it's State control in a generic sense. The question is the degree to which we, in this bill, should mandate or dictate to the States that the State plan go farther in not only taking local wishes into concern, but the degree to which State plans should specifically allow local government to, say, develop separate and independent standards.

I think I'll start with you, Ms. Reynolds. Maybe you could expand a little bit on that, looking toward a view of some reasonable compromise here.

Ms. **Reynolds**. Well, first of all, let me make it clear that the League believes that we do need to have State-wide plans. It is illogical for the city of Denver, for example, to have its very own solid waste management plans and for my neighbors all around me to have significantly different and perhaps less restrictive ones, because I can't keep up with my half if they're not doing theirs. So we do believe in State-wide planning for this.

In terms of assuring that local government has a role in developing those plans, I think the reasons for it are almost self-evident. We are the practitioners and we need to know that when the plan goes into effect, it's something that we can do and something we can actually afford and something that we can do in an orderly manner so that we know what to expect of ourselves and our neighbors as we go down the road.

Senator **Baucus**. What would you change in this bill?

Ms. **Reynolds**. There is language in the House version which does speak to involving local government officials, specifically in the development of regulation. We believe it is usefully moderate language, and of course, that can easily be provided here for the record. We may have a copy among the files to hand over here at this time. It simply states that as the States go about developing their regulations and so forth, as well as the Federal Government in developing theirs, that all the parties of interest, including local government and cities and counties, be at the table for their input, for their ideas, for their judgment on the practicality and usefulness of certain provisions. There is some precedent for this with other Federal plans that we have to deal with when we do regional or State-wide plans—in transportation, for example.

Senator BAUCUS. The provision that you're referring to now, though, refers to the House's municipal ash bill.

Ms. REYNOLDS. It's in H.R. 4357 as well as in H.R. 4902, a bill dealing with air emissions from incinerators as well as ash disposal practices.

Senator BAUCUS. Yes, that's the municipal ash bill. That's right.

Ms. REYNOLDS. Yes, and there is language in there that is acceptable to us because it gives us the kind of role we need.

Senator BAUCUS. Mr. Jorling, what can you add to this?

Mr. JORLING. Well, I think the proper State role in relationship with its municipalities should be very similar to the role that the States have with the Federal Government, and that is that our responsibility is to prepare a generic plan as to how waste is to be managed in our State, in New York.

Among the principles that we're operating under is that we have a responsibility in New York to manage within our own boundaries all of the waste that we generate. We think that's the only prudent course for the future, and we think it's an essential step. We're not going to be there next year; we may not be there in 10 years, but that's certainly a principle that we're operating under.

The second thing, then, is to take our generic plan, issue it, have interaction with the municipal governments, and then assist them in doing their own planning in a manner that is consistent with that, to translate the generality into specific details.

Senator BAUCUS. But you think the States should have the final say in development of the plan?

Mr. JORLING. Well, the final say—the States should have the responsibility to say how the game is to be played. Our communities tell me they want to know how to manage waste properly. They want from us a clear set of rules governing incineration, governing landfilling, governing recycling——

Senator BAUCUS. But you think the States should have veto power, or the ability to stop a State plan from being implemented?

Mr. JORLING. If a community chooses to build a waste-to-energy plant, that community should go forward and build it if it meets our regulations. We shouldn't veto that choice unless it doesn't meet the health and environmental standards that we've established.

Senator BAUCUS. Ms. Reynolds, do you think that cities should be able to hold up a State plan or not?

Ms. REYNOLDS. I don't beat my children, either. That's an interesting question.

Basically, we agree with Mr. Jorling. If the State has done substantive and real consulting with the local government in setting up those rules, then it really does work. We need desperately to know ahead of time before we make these investments what the rules are going to be, and then we need those rules enforced equally within that State boundary to all jurisdictions.

So no, a city shouldn't be able to hold up a State plan, but neither should a State be able to hold up what a city needs to do by rearranging the rules halfway through the process or by an uneven enforcement of the rules. From what I've heard from Mr. Jorling, I don't think we have an argument. It's simply a matter of good common sense and good planning for us to all work together, to set the rules ahead of time so that when the investments are made they are made for everyone along the same ground rules and everyone has their expectations met.

Mr. JORLING. There are two additional points that I would make very briefly, Mr. Chairman.

One is that we are trying to encourage regionalization at the local level——

Senator BAUCUS. By "regionalization" you mean——

Mr. JORLING. The county level. The counties in New York State are very important and fully authorized political jurisdictions. Multiples of counties should come together to deal with the management issues rather than just sporadic communities within them. We try to facilitate that through preferential assistance for that kind of effort.

There is another area that is crucial which you touched on in your opening statement, and that has to do with the siting question. In New York State we are grappling with this issue. Many interest groups, the business community, for instance, recommend to our legislature that there should be a State authority to impose a site that is necessary, consistent with the State plan, even with the local plan, to be able to insist that that facility be built.

We proposed a modified version to the legislature last year. The legislature still did not enact it, but it was a way of delegating State authority to overcome local impediments to siting, but that that authority would be implemented by a regional solid waste authority.

So we have an area there that is going to continue to be a struggle, I think, not just in New York but in all areas of the country. Overcoming NIMBY is not an easy task.

Ms. REYNOLDS. Could I speak very briefly? I have to get to an airplane.

Senator BAUCUS. I've got to catch a vote, so we're together.

Ms. REYNOLDS. I just wanted to thank the subcommittee very much. I just wanted to make sure that our policy statement gets into the record. It is provided here.[1] Excuse me; I have to go home to Denver and meet my own vote. Thank you very much.

Senator BAUCUS. I would like to recess this hearing for about 10 minutes. If you could stay, Mr. Jorling, I have some more questions to ask.

Mr. JORLING. Thank you.

Senator BAUCUS. Thank you very much.

[Recess.]

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[1] The statement referred to has been retained in committee files.

Senator BAUCUS. Mr. Jorling, another question that I wanted to ask you is this. You stated that in the New York law, the regulatory scheme is somewhat similar to this bill; in fact, you implied—which is true—that the provisions in this bill are taken in some respect from the provisions that are now in the State of New York law.

Is it working? Does it make sense that there be Federal legislation, based upon the New York experience, since the State of New York has similar legislation? Yes or no? And if the answer is no, then why not? And if the answer is yes with refinements, I'd like to find out what those basic refinements should be, other than the ones that you've already stated.

Mr. JORLING. I think yes, it is important. The concept of federalism that is characteristic of the Clean Air Act, the Clean Water Act, and of your bill is very important. We need to have Federal thresholds established below which no operation in this country——

Senator BAUCUS. But this goes even further. It's a comprehensive regulatory scheme. It has Federal minimums but with State plans, and with no siting unless there is a permit; that is, unless the State grants a permit, and with incentives for minimization and for recycling. So it's a comprehensive plan. Does it make sense for us to enact a comprehensive solid waste plan?

Mr. JORLING. Yes, it does, and it creates a framework into which the detail is then fit. The detail can vary from State to State and from local government to local government, but it's important that there be a basic framework that establishes a norm. This is important, partly because the Federal Government can act once and avoid having each State having to recreate the wheel. One of the great limitations that we've suffered under for the last eight years is that we've had to issue our incineration emission standards in the absence of Federal action, but the Federal Government is the entity that has all these research capabilities. We don't have research capabilities. The Federal government should establish what the numbers are for certain contaminants, and once they are established, should require that they be met nationwide.

Senator BAUCUS. What about the financing mechanism in this bill that establishes a fee on virgin materials used for packaging? I think it comes out to about $7 per pound, roughly seven-tenths of a cent per package, with the funds to go back to the States to provide technical assistance to the States in developing their plans.

First, do you think that amount of dollars is adequate? And second, do you think that the mechanism for raising that money is proper?

Mr. JORLING. We're all looking very creatively at ways of raising revenues to support regulatory and management programs.

With respect to materials like packaging materials, that are——

Senator BAUCUS. By the way, I misspoke. It's $7.00 per ton, not $7 a pound.

Mr. JORLING [continuing]. That are so inherently in interstate commerce, the appropriate vehicle to establish incentives—financial incentives, packaging and labeling requirements, and what have you—is at the Federal level. We recognize in our statement that this is where incentives should be established. But absent that, we in the State of New York are looking at our authority to examine how we can influence packaging.

But it's clear that the most cost-effective way to do it would be at the Federal level.

There is no question that we must act on materials that are in interstate commerce, like packaging, batteries, and even tires, although I'm confident that we're going to have a deposit tax on tires within the next legislative year. We can't wait. But it would be more appropriate for the Federal Government to address materials that are inherently in interstate commerce.

Senator BAUCUS. Ms. Reynolds said there should not be a standard for mandatory recycling percentage. This bill provides for a 25 percent recycling goal; it's not a standard. It also provides for exemptions and "outs," if you will. Unfortunately she is not here to address this point specifically, but let me ask you: do you think there should be a stated, specific goal for the amount of waste we should recycle, even though different States are different?

Mr. JORLING. We need goals. We need stated objectives. We in New York have a 50 percent recycling goal by 1997. What is important, I think, and where she may have been concerned, is that it's not appropriate to describe which of the possible recycling systems you should use in a given community. It is more important to establish the goal and focus on that, but allow communities to choose the actual method, such as home separation, separating the quantities in the home, a household separation of recyclables and nonrecyclables, with actual subdivision of the recyclables done in a centralized facility.

So those kinds of choices should be left up to the culture and the history and the traditions of a given community, but the idea of a goal is crucial. New Jersey's program even goes further. It's a mandate, not just a goal, of 25 percent, and it has shown that we can move much further in the direction of recycling than anyone would have thought possible just two years ago.

Senator BAUCUS. As you know, this bill lets the States decide how they meet that goal. I think that's important.

Mr. JORLING. That's right.

Senator BAUCUS. What about "not in my State," that is the confrontation that States have? Some States feel that other States are producing all this waste so they shouldn't ship it over to our State, and vice versa. Do you think that provisions of this bill help reduce the problem of States blocking the transportation of waste shipments from one State to another, or not? How do you suggest we address that?

Mr. JORLING. I think the bill will help, because by establishing minimum norms it assures that everyone has to do the right job of management with waste, and that's an important element.

As I mentioned before, in New York we have established a principle—a policy, a goal, if you will—that we want to manage all of the waste that we generate within our boundaries. We don't now. We have communities on Long Island shipping their waste to Ohio——

Senator BAUCUS. By managing all waste, do you mean to dispose of all waste within the boundaries of the State of New York?

Mr. JORLING. We should manage it within our boundaries because we don't think it's a long-term, viable program to rely on a disposal site outside of our jurisdiction. Acces to out-of-State sites can be cut off very quickly, and we have no control over that. So we think that as a prudent step, State governments should manage the waste that they generate within their boundaries. We have done that with the low-level radioactive waste under Federal stimulus.

Senator BAUCUS. What does New Jersey do? It's a more populous State. Do you think New Jersey can adequately manage all of its waste within its boundaries?

Mr. JORLING. I think it's possible to manage all of the waste that's generated in New Jersey within New Jersey, just as it is within New York. There may be some situations where an aggregate of States could come together and deal with one part or another of the waste stream together. For instance, we have a situation in western New York where there is an incinerator of a special sort for hazardous materials in Canada; conversely, there's another kind of incinerator in New York State for some materials that cause Canada to export into the U.S.

I think those kinds of things can work out, but as a general policy for conventional household garbage, we in the State of New York should manage it within our boundaries.

Senator BAUCUS. How are you going to reach your 50 percent recycling goal? People point out that there's not a market for many recycled materials.

Mr. JORLING. Marketing is crucial. In New York we have an effort on our economic development side to encourage the development of secondary reprocessing because, as you point out, if the market folds—or at least oscillates quickly—it can very dramatically influence recycling programs. For instance, the market for newsprint has fallen very rapidly in the last couple of months in the northeast. That waste has been going to the Orient for reprocessing. The bottom fell out of that. That influences New Jersey, New York, and all the other adjacent States.

So there's a "chicken and egg" thing. At the same time we are creating the recycling systems which generate the raw material, we have to create the capacity, the reprocessing capacity, to manage it. The reprocessing capacity basically says that we won't invest until we are sure that the supply is there. The city people say, we won't go into the recycling until we are sure there's a market to buy the material we're going to generate. One of the roles of the State is to sort of facilitate and maybe even broker that development.

Senator BAUCUS. How much will the requirement of Federal procurement help?

Mr. JORLING. Federal procurement—we have an aggressive State procurement program in New York that helps a great deal because it establishes an assured market so that the investor can say, "There's enough assured market that we can invest in the future and into this business enterprise." So assured markets are crucial to that initial commitment to invest.

I would point out, Mr. Chairman, because I think it's important to know that we are achieving success, that the community that is often associated with the barge, Islip, New York, is a community of 400,000-plus people. Because the barge embarrassed them—more than the town supervisor will admit—because it embarrassed them they said, "We're going to go into recycling in a committed way." The person who did that was a naysayer. He said, "It's not going to work, but I'm at least going to shed the embarrassment." In 18 months they went from 4 percent recycling recovery to 40 percent. Islip is going to be in conformance with the State plan of 50 percent recycling by the end of next calendar year. It shows that a community of 400,000 people can do it.

Senator BAUCUS. How are they doing it?

Mr. JORLING. Basically, they have two pickups a week for recyclable material at each household——

Senator BAUCUS. Separated?

Mr. JORLING. It's separated into recyclable and nonrecyclable. The recyclable portion is then taken to a central separating facility in which the metals, glass, paper, and cloth materials are all separated mechanically with labor. There is substantial labor, but the program is still cost-effective. The material is then marked independently. They are also starting a composting facility for organic materials. We can point to those examples of major communities succeeding, and then we can spread it more widely.

Senator BAUCUS. And it is cost-effective?

Mr. JORLING. It is very cost-effective.

Now, the degree of revenue production is greatly influenced by those markets. This paper decline that I mentioned has hurt them, but they are going to continue the program nonetheless. The reason for the declines is that there is only one basic reprocessor in the northeast and it's in New Jersey, Garden State Paper. The rest of the material goes to the Orient, and the Orient then in a sense becomes a controller of the price. We need to have more capacity in the United States for paper reprocessing so that in effect we are not held hostage to a cartel that exists outside the country.

Forty-some percent of the cargo leaving the Port of New York—and that's the whole Port Authority, New Jersey and New York—is waste material going abroad.

Senator BAUCUS. How do we get that greater capacity to reprocess?

Mr. JORLING. The way we're trying is to use standard economic development techniques, i.e., providing grants and preferential loans to individuals and firms who are willing to invest in capacity in New York.

Senator BAUCUS. Do you have any reaction to the minimization parts of the bill? I think that for industry, we have a requirement for 5 percent after 10 years.

Mr. JORLING. I think what our experience is showing, because we have a waste minimization program underway on the hazardous waste side, is that a flat number applicable to all industry types isn't very useful. There are many industry types, SIC codes, which generate a lot of waste where 5 percent is a very paltry number. There are others that are already very tightly disciplining themselves, for whom 5 percent could be difficult to acheive.

What I think would be more appropriate would be to establish some goals, but then create a staged system focusing first on the

SIC codes that generate the most waste, and address a cost-effective best-technology type of criteria to reduce the waste generation of those facilities.

Senator BAUCUS. So should we set different standards for industries with different SIC codes, or should we set an average and let the States work it out?

Mr. JORLING. I'm not sure. I'll think about what kind of goal formulation would be appropriate because there is such wide variety out there.

I think the key is a concentrated, focused effort on industry SIC codes very similar to the work that we did in the effluent guideline program under the Clean Water Act, where you take an SIC code, you examine it in detail, you understand what all the technological possibilities are, and then you apply that across that SIC code.

Senator BAUCUS. If you could, Mr. Jorling, submit your thoughts and recommendations on that to the committee. We would very much appreciate it.

Mr. JORLING. I certainly will.

Senator BAUCUS. I see that Senator Durenberger is here. Senator Durenberger is cochairman of the committee and cosponsor of the bill and very active in solid waste management issues.

Senator Durenberger?

Senator DURENBERGER. Mr. Chairman, I would just take a minute to say that I appreciate all of the help that Mr. Jorling and his staff and others have done for this subcommittee over the years, but particularly as we get ready for the reauthorization of RCRA.

Mr. JORLING. Thank you, Senator.

Senator BAUCUS. Senator Breaux?

Senator BREAUX. Thank you, Mr. Chairman. I want to thank Mr. Jorling for being here.

Thank you, Tom, for those nice comments. I will observe that things must be more difficult on the outside because when you were over here you had nice, dark hair. One summer on the beach and it all turned gray.

I'd like to ask about interaction between the States that run the programs and the Federal Government who sets the standards and turns them over to the States to run them. Is that working? Some States would probably like to give it back to us because of political problems that they are having, in particular, siting the solid waste disposal sites. On the local level it becomes a political football. They are all local elected officials and sometimes they just don't have the political courage to make a siting decision. So some of them are telling us, "We wish you'd take it back at EPA and go ahead and make the decision that has to be made."

Mr. JORLING. In general in the area of solid waste I think there are several States—New York is one, but there are many others, New Jersey, certainly Connecticut and Massachusetts—which have moved way beyond where the Federal Government is. We haven't been able to wait for the Federal Government to issue regulations, guidelines, and what have you in the area of solid waste. So the Federal Government has ceased to be an effective actor in the solid waste management area. We wish we had their help but we don't, so we've had to act independently of them.

Senator **Breaux**. Is there any kind of a forcing mechanism that would be helpful, in your opinion—not speaking just for New York, but maybe for the States in general that are unable because of political sensitivities to select waste disposal sites—something, a tax incentive or some sort of loss of Federal funds, if in fact they are unable within their State to handle the solid waste that they generate within that State?

Mr. **Jorling**. We have adopted at least the possibility of compensation schemes paid for out of "tipping" fees for host communities, where a community becomes the site of a waste energy plant or a transfer station or a landfill. That community in effect receives a diverted part of the tipping fee simply because it has become the site of that facility, and it can use that money for schools, fire protection, police protection, whatever. It makes it attractive to the community to become——

Senator **Breaux**. Do you have that in New York now?

Mr. **Jorling**. Yes. We need to do more with it because communities still say that unless they can be assured of those revenue streams, they're not willing to rely on them. That gets back to the question of how the State can create a region of large enough size in which the revenues will be great enough to become attractive to a host community.

The siting question, as I mentioned before the break, is a very difficult one. We have concluded—at least the Executive in New York—that we don't have to have a full-blown State override, but we have proposed to our legislature a mechanism that if a county or a group of counties comes up with a plan that is consistent with our State plan and consistent with the health and environmental regulation, yet there is a small community that has adopted an ordinance that says "no facility of that sort in our jurisdiction," then that county could be delegated State authority for purposes of overriding that local impediment. But as I also pointed out, the State Legislature did not adopt that this year.

Senator **Breaux**. You do not have a State override of a local county's or municipality's unwillingness to grant a permit?

Mr. **Jorling**. Not at this time.

Senator **Breaux**. You would like to have?

Mr. **Jorling**. We need some vehicle, but we have our own internal debate in New York as to whether it should be a full-blown State override or whether the State authority could be delegated to a local government, to a county or a collection of counties, to use that authority to override a local impediment.

Senator **Breaux**. What about any kind of a RCRA provision which would establish that authority from here when we delegate the program to the States?

Mr. **Jorling**. Here you get back to that Federal-State relationship. The States often like to be able to point to a different source of the onus so that if the Federal Government says that "as a condition of receiving delegation for RCRA you have to have a program in place that allows you to override local impediments," then some State legislatures say, "Okay, that's a good enough excuse." Some State legislatures, however, say "We are not going to accept that mandate; we'll let the Feds run that program here." So it's a delicate balance.

I think a carefully worded program which wouldn't be a State override as much as it would be a mechanism that would allow State authority to be used to override might be a useful addition to the Federal law.

Senator **Breaux**. Thank you very much.

Mr. **Jorling**. Thank you, Senator.

Senator **Baucus**. Thank you, Mr. Jorling. Your testimony has been very valuable.

Mr. **Jorling**. Thank you, Senator, and members of the committee.

Senator **Baucus**. The next panel consists of Eugene Wingerter with the National Solid Waste Management Association; James Banks, Director of Government Affairs for Waste Management, Inc.; Ben Harvey, President, E.L. Harvey & Sons; Herschel Cutler, Executive Director, Institute of Scrap Recyclers; and Richard Fortuna, Executive Director, Hazardous Waste Treatment Council.

Senator **Durenberger**. Mr. Chairman, might I make a brief statement before this panel begins?

Senator **Baucus**. Surely.

OPENING STATEMENT OF HON. DAVE DURENBERGER, U.S. SENATOR FROM THE STATE OF MINNESOTA

Senator **Durenberger**. I welcome the beginning of legislative hearings on the reauthorization of the Solid Waste Disposal Act, and I want to commend you, Mr. Chairman, in particular for the bill that you have introduced and for the foundation that you have already established on this subject through the oversight hearings of the past year and a half.

I believe we will enter the next Congress with much of our work already done and with high hopes that we could get RCRA completed in the next two years.

As I look at the reauthorization process I believe we need to focus our efforts on four areas.

First is waste reduction and recycling, and there your bill sets for an aggressive agenda for waste minimization, both hazardous waste and solid waste. There is no doubt that waste minimization will be the main theme of the RCRA reauthorization, just like treatment and minimum technology were the themes of the 1984 bill. I hope that we can go beyond goals and technical assistance and set some real standards for waste reduction and for the reuse of waste materials.

The second area is disposal of the so-called "special wastes," the large volume waste streams that have been exempt from RCRA pending study by EPA. Those studies are now in and it is time for us to decide on comprehensive regimes for oil and gas, mining, utilities, sludge, and industrial waste streams. The approach that I favor is to some extent different from the one included in your bill. The comprehensive groundwater protection bill that I introduced earlier this year, S. 2091, includes a regulatory regime for most of these wastes, which is directed more toward State action and depends less on Federal standards, and uses a permit only as a hammer for States that don't have programs. But it also covers a larger universe of wastes, and I will be urging this subcommittee to look at that formula for regulation as well.

The third area is waste disposal and treatment capacity. The Nation, as we know, is facing a volume crisis with too much waste, growing too fast, with too little capacity to treat and dispose of it. To some extent, waste reduction and waste recycling are the appropriate responses to the crisis; they have to be the first priority, but we still need new facilities to complete the back side of the hierarchy of treatment and disposal as well.

New facilities are almost always much safer than what we have out there today, but new facilities are difficult to site and permit in today's climate, so we need to make a difference here on that subject. We need to find a way to get the Nation moving more rapidly on siting and building new treatment and disposal facilities, using the newer and safer technology we have.

The fourth and final area that I would mention are the amendments which will need to be made to the 1984 bill for hazardous waste and underground storage tanks.

We are going to work on subtitle (C); I don't think we can avoid it next year, and certainly not the year after. I see three principle problems that need to be addressed. One, waste listing and delisting is without apparent logic under current regulation and needs to be reformed and extended. Two, corrective action needs to be brought into line with the decisions we made on Superfund in 1986, and we need to find a way to make the policy of the Congress on the subject the policy of the Executive Branch. Three, we need to look at the permitting process to make it workable and effective for the resources that are invested.

Finally, I would mention underground storage tanks. Here there is good news after all these years. EPA finally got the underground storage regulations promulgated. They are going to be effective beginning December 1, and everyone at the Office of Underground Storage Tanks at EPA deserves to be commended. They've worked to overcome difficult hurdles. The regulated universe is very large, particularly in the area of small businesses. There was no commitment from the leadership of the agency to the program. We amended the law in midstream with the corrective action program that we included in Superfund, and so on. It was a tough job, but it was done.

As everyone might expect, I wish the regulations were a little stronger and I would have liked the mandate for secondary containment in areas with sensitive groundwater resources. I think the leak detection side of the program could have been more aggressive in forcing technology at an earlier date. I believe that a complete program for financial responsibility is legally required as part of the package and should be effective on the same date. I will be recommending some amendments to the underground tank program to the subcommittee in the near future which will also include a program for above-ground tanks.

So that, Mr. Chairman, is my view of our task. As always, I look forward to working with you on this very aggressive legislative effort. These are important questions and you have certainly given us what I believe is a good bill as a starting point for this discussion.

Thank you.

Senator BAUCUS. Mr. Wingerter, why don't you begin?

STATEMENT OF EUGENE WINGERTER, EXECUTIVE DIRECTOR AND CHIEF EXECUTIVE OFFICER, NATIONAL SOLID WASTES MANAGEMENT ASSOCIATION

Mr. WINGERTER. Thank you, Mr. Chairman. I would like to request, with your permission, that my extensive written statement be submitted for the record. I have a brief oral statement.

Senator BAUCUS. For the panel, all of your written statements will be included in the record. As you know, we have five minutes per witness.

Mr. WINGERTER. Mr. Chairman, before I begin I just want to express our appreciation to you for honoring us in Boston earlier this month at the National Recycling Conference sponsored by my Association. As you unveiled your thoughts on the concepts of this legislation you sparked two days of extensive debate and very enthusiastic response for the provisions of this legislation.

The National Solid Wastes Management Association is a trade group which represents 2,500 private waste service companies in the United States and Canada. Our members include refuse haulers, landfill and resource recovery operators, recyclers, hazardous and biomedical waste treatment and disposal firms, equipment manufacturers, and others. To give you a sense of perspective, such companies now collect over 80 percent of the country's residential and commercial refuse and operate around one half of its solid waste disposal capacity.

It gives me great pleasure to testify here today because we support virtually every provision of your excellent bill. As you know, until now Federal and State efforts to address the country's growing solid waste management problems have been spotty and haphazard. This performance has not gone unnoticed. Our opinion polling shows that Americans are becoming increasingly uneasy about waste disposal issues and about the apparent lack of leadership from public officials.

Your bill provides that leadership. In particular, its proposed amendments to the Resource Conservation and Recovery Act would go a long way toward remedying what we believe to be the major defect of existing procedures, the absence of a well-defined national policy on solid waste management and a clear Federal role for setting environmental standards which provide a floor for State regulatory efforts. We applaud your initiative and will do everything we can to support it.

Let me outline four important issues which we believe your proposed bill addresses.

The first is better planning. In our view the most critical obstacle which faces policymakers in many parts of the country today concerns waste management capacity. New landfills, resource recovery plants, and even recycling centers are not being built fast enough to meet local or regional demand. Although the reasons for this problem are varied, one constant theme emerges: fear that such facilities will endanger public health and the environment.

In the past Congress has tried to address such problems by requiring State officials to prepare solid waste management plans. As part of the planning process it was assumed that these officials would also look for viable solutions. Unfortunately, as we know, this has not been the case. Your bill takes a giant step forward by making State authorities responsible for assuring adequate management capacity, not just for producing a document to be placed in the files.

The second provision is Federal oversight and enforcement. To ensure that State officials carry out national policy it is essential to provide the Environmental Protection Agency with firm oversight and enforcement authority. Such authority is incorporated into your bill. We are particularly encouraged by provisions which allow EPA to step in where States have been remiss in devising adequate solid waste regulatory programs and to assume responsibility for permitting new facilities until this deficiency is overcome. Equally important, Federal grant money would be denied to States which do not make sufficient progress with their waste management efforts. Without such provisions Congress cannot be assured that State compliance with RCRA will improve.

The third area is expanded recycling. One of the essential elements of effective solid waste management involves recycling. According to our opinion research 70 percent of American adults believe that recycling programs should play a major role in future management efforts. As members of the commercial recycling industry we have accumulated a large body of experience which we believe will be useful to Federal, State and local officials as such efforts evolve.

We also recognize that recycling programs face significant obstacles which your bill addresses. Perhaps the most serious of these obstacles involves the problem of developing new markets for recoverable materials. By directing Federal agencies and their contractors to purchase recycled products, even though slightly less expensive alternatives are available, Congress sends a clear message to manufacturers, distributors, and others who must make investment decisions or expand existing product lines. At the same time we are encouraged by your effort to eliminate potentially harmful or dangerous substitutes from current manufacturing processes. Such measures are necessary to reduce the country's overall waste stream and to allow safer disposal of whatever cannot be reused or reclaimed.

And finally, the fourth point is orphan waste. Perhaps one of the thorniest issues which Congress must resolve involves so-called "orphan wastes." Once again we commend your solution to this dilemma. In our view RCRA must establish firm priorities for EPA to identify which waste streams will be regulated under subtitle (C), which ones will fall under subtitle (D), and how these waste streams should be managed.

Although we have one suggestion to make about this section of your bill, we believe that it should refer exclusively to regulations which are obligatory instead of guidelines which do not seek to be. We feel that the proposed measures will achieve a major public policy goal, bringing unconventional waste up to the same management standards as other by-products, thereby assuring adequate protection of public health and the environment.

Mr. Chairman, this concludes my statement. To close briefly, in our written statement we provide further discussion of these opinions. We have also prepared a brief outline of our views on subtitle (C) concerning hazardous waste regulation which might be helpful to you.

Finally, let me say that we are delighted with the leadership that you have shown in drafting a bill which goes a long way in providing what we feel is an effective solution to this serious problem.

Mr. Chairman, may I also introduce into the record a document we prepared and released this month that identifies the issues and they very clearly track your legislation. We are pleased that it is very responsive to these issues.

Senator **Baucus**. Without objection, it will be included. (See p. 99.)

Mr. **Wingerter**. Thank you very much.

Senator **Baucus**. Thank you very much, Mr. Wingerter.

Our next witness is Mr. Banks.

STATEMENT OF JAMES BANKS, DIRECTOR, GOVERNMENT AFFAIRS, WASTE MANAGEMENT, INC.

Mr. **Banks**. Good morning, Mr. Chairman. It is a pleasure to be here again. We appreciate this opportunity to discuss your proposed legislation, the Waste Minimization and Control Act of 1988.

This committee has a long and proud tradition of leadership in developing tough, innovative legislation to protect the environment. We believe your bill will claim its place in that tradition because of its comprehensive, aggressive approach to an area filled with difficult issues and significant environmental consequences. The Federal presence in solid waste disposal stands today where the national air pollution and water pollution programs stood nearly two decades ago, in the dark ages. We believe your initiative will bring about a much-needed overhaul of the entire program.

As the world's largest provider of curbside recycling and other waste management services, our company brings a strong interest and a wealth of experience to this discussion. We are a high growth company in a high growth industry because, I believe, we have seen the need for comprehensive, integrated solutions to waste management problems. We have been able to export our technical innovation and professional expertise to all of North America and four other continents. More than most, Waste Management understands and appreciates the compelling national interest in measures to promote recycling, waste reduction, and carefully controlled disposal activities.

The starting point for this discussion must be the Nation's inability to provide enough environmentally sound capacity to treat and dispose of its wastes. This problem is a regional one at the moment, but it is growing daily and without a doubt will assume national proportions in the next decade absent a strong Federal initiative. The technology is there to meet these needs, but we are seeing a failure of political will that I believe the Congress must move aggressively to remedy. Your bill recognizes that fact, and it takes three important steps in the right direction.

First, your proposal encourages waste volume reduction, recycling, and reduction in the toxic content of waste materials. These represent first principles in any workable national effort to match the supply of and demand for waste disposal services. As a Nation we not only should stop discarding reusable materials, but we must stop accelerating the growth of waste volumes that place a strain on the disposal system. These measures go well beyond good policy; we believe they are necessities.

Second, for the first time the bill would place on the States a Federally enforced obligation to plan for and site the necessary treatment and disposal facilities to handle the waste volumes expected to remain after source reduction and recycling have had their impact. Your bill goes to the heart of this complex problem by requiring good State programs, by authorizing Federal assistance, and by imposing Federal sanctions strong enough to spur action.

Third, the bill requires that EPA follow through on the Federal commitment to effectively regulate waste disposal facilities. In the 1984 RCRA amendments Congress directed EPA to issue Federal standards because it feared that many States had failed to move aggressively in this area. EPA has not done that; instead, EPA has deferred once again to the same State programs. Our industry has lobbied EPA for two years to provide minimum design, location, operation, and monitoring requirements. EPA has the authority to act. What your bill adds—and this is most important—is a duty to meet this responsibility.

Another component of your bill that requires special attention and support is its provisions to address what we term the "orphan wastes." Nearly 230,000 subtitle (d) disposal facilities operate in this country, managing some 11 billion tons of solid and liquid wastes. For example, 430 million tons of industrial wastes annually are placed into onsite waste ponds, piles, landfills and land application units. This is three times the amount of municipal solid waste disposed of in all the sanitary landfills in the country. These wastes are contributed by the organic chemicals industry and over 20 other industrial categories, and they contain relatively high levels of heavy metals and organic constituents. Very few of these units have groundwater monitoring, liner systems, or other basic requirements.

EPA has focused its attention on the roughly 6,000 sites handling municipal waste and has all but ignored the other quarter of a million sites despite obvious and recognized potential for environmental harm. Regulatory action for all of these wastes would be forced by this legislation. While preserving EPA's authority to utilize subtitle (c) wherever necessary, the bill would require disposal permits and set schedules for issuing regulatory standards appropriate to these waste categories. It is an ambitious and tough proposal, but it is also long over due, and Waste Management supports it fully.

Mr. Chairman, this is an excellent bill. It includes other important initiatives too numerous to discuss in detail, such as restrictions on waste exports and a much-needed approach to biomedical wastes. I think you will find widespread support and a keen interest in this legislation. We appreciate the opportunity to take part in the beginning of this national dialogue and to help in your search for workable solutions.

I would be happy to address any questions you might have. Thank you very much.

Senator **Baucus**. Thank you very much.

Mr. Harvey, we will hear from you next.

STATEMENT OF BENJAMIN HARVEY, PRESIDENT, E.L. HARVEY & SONS

Mr. **Harvey**. Good morning, Mr. Chairman. My name is Ben Harvey and I am in charge of dispatching everything from trash to recyclables that goes out of E.L. Harvey & Sons' waste transfer and recycling facility. This includes contracting with brokers and mills to sell recyclable products, and with landfills and waste-to-energy facilities to dispose of trash.

E.L. Harvey & Sons is a family owned and operated business founded in 1911 by my grandfather. We are located in Westborough, Massachusetts and serve all aspects of waste removal from refuse collection to transfer, disposal, and recycling.

Our recycling operation was started in the 1940's. We recycled corrugated cardboard, newspapers, rags, and ferrous and nonferrous metals as a way to supplement our income.

Recycling has always played a major role in our operation. In the early years we hauled the recyclables that we picked up loose and sold them to a packer. In the mid-1960's, with the introduction of sanitary landfills, we knew that we must conserve space, so we bought a small down-stroke baler so that we could bale news and corrugated cardboard ourselves. Now, 20 years later, we have two buildings totalling over 37,000 square feet and three high density balers for waste paper. Ninety-five percent of our paper is put into overseas containers for export to more than 10 countries, although this has changed in the last month. We are not exporting any corrugated cardboard overseas at this time; the market has essentially dried up. Besides waste paper we recycle ferrous metals, such as light iron, cast iron, heavy pipes, and nonferrous metals such as copper, aluminum, and brass. Again, we have a problem with light iron and white goods. Because of the contaminant PCB's as a shredder residue we are not able to dispose of our white goods and light iron at shredders in the New England area.

Yard waste that is brought to our transfer station is put into a mulch pile that is eventually used to cover our landfill. Wood waste is segregated whenever possible and trucked to a plant that chips it to make refuse-derived fuel.

As a waste service company concerned about the environment it gives me great pleasure to testify here today and to share with you from the perspective of a waste hauler, recycler, and transfer station operator some thoughts on your very important bill.

We believe that recycling is a legitimate waste management tool. However, it is not the sole answer to the solid waste disposal crisis. We need as many outlets for waste as possible. As a matter of fact, E.L. Harvey & Sons even maintains a backup, State-permitted landfill at our transfer station so that we are never left without a place to take our waste.

We support your goal of recycling waste to the maximum extent possible consistent with market demand for recyclable materials. We believe that almost any goal is achievable if the correct amount of market demand exists. However, what makes recycling work in the United States is economics, and something has to change in the current economic environment in order to increase recycling. We recycle because it is profitable. In order for us to recycle more, it will have to be profitable.

Three events could change the economics of recycling. One is an increase in market demand and price for recyclable materials. Right now we are seeing a slide the other way.

Number two is an increase in waste disposal costs. In the northeast we are already seeing this.

Three is a direct payment to the industry to provide the service, similar to waste collection and disposal contracts.

From our perspective the single most important event is market development. Recycling cannot and will not occur without markets. In the past, as markets demanded more material and market prices subsequently increased, the recycling industry responded and developed the supply.

Your bill furthers an important first step in the development of markets, the Federal procurement of recycled products. We support your efforts. We feel that little is known about what the Federal Government has already implemented. Federal agencies need the kind of policy direction your bill provides to implement programs and to overcome prejudice that exists against recycled products in the marketplace. Recycled products cannot still be treated as second class products.

Market development should not end with Federal procurement policy, however. The Federal Government should research new markets for recycled materials and new applications for recycled products. I am particularly concerned about old newspaper. The current and projected market demand for old news will not be enough to absorb the anticipated supply. With newspaper comprising 10 percent of the waste stream and being the primary target for recycling programs across the Nation, we need to develop new markets quickly for old news.

On top of research, the Federal Government should consider providing potential markets with financial incentives to either retool or expand to handle recyclable materials.

Your bill also includes a provision that would provide implementation grants to the States. It is our opinion that there exists an industry which has already made substantial capital investments in processing equipment that has the capacity to handle much of the increased volumes of recyclables that are anticipated, and that implementation grants that are designed to increase the number of these "middlemen" or pre-processors will not increase recycling. It will only give new companies an unfair advantage in the recycling industry over existing recyclers who are diligently paying off bank notes.

We believe that grant money is not needed to increase the number of middlemen. This will happen naturally once the three economic factors I mentioned previously are in place.

Senator BAUCUS. Mr. Harvey, summarize if you could.

Mr. HARVEY. Yes, sir.

Grant money should be allocated to where it can do the most good—for technical assistance, as your bill provides; for market development, including university research grants; and for public education.

In summary, I would like to commend the committee and its Chairman for providing leadership on these very important issues. I would be happy to entertain any questions you may have. Thank you.

Senator BAUCUS. Thank you, Mr. Harvey.

Mr. Cutler?

STATEMENT OF HERSCHEL CUTLER, EXECUTIVE DIRECTOR, INSTITUTE OF SCRAP RECYCLING INDUSTRIES, INC.

Mr. CUTLER. Thank you, Mr. Chairman. My name is Herschel Cutler. I am Executive Director of the Institute of Scrap Recycling Industries, the national trade association for the scrap recycling industry. ISRI's 1,800 members process, broker, and consume scrap metal, paper, glass, textiles, and plastic for reuse in making new materials. Though often not recognized, our industry has decades of real world experience in recycling materials that would otherwise have to be buried or burned.

Today we would like to discuss briefly four subject areas, four means to assure and promote effective recycling. For these approaches to be effective, better legislation—such as you have offered—is needed which would incorporate the following concepts:

First, a recognition of the historic and fundamental differences between solid waste and recyclables, and between solid waste management and recycling, is absolutely essential. Serious consequences of the failure to differentiate between wastes and recyclables could be the regulation of recyclers as if they were solid waste management facilities. History shows and experience confirms that there is an important distinction between recyclables and solid waste. Whether secondary materials should be considered as solid waste for regulatory purposes depends on how it is actually handled. Was the material thrown away or abandoned without reuse or reclamation? Or was it instead specifically diverted or removed from other discarded materials for purposes of materials recovery? Where a particular material is bought and sold in commercial transactions on a regular basis, a strong inference arises that discard or abandonment was not intended, and solid waste management controls would not be indicated.

The language of S. 2773 appears to be slightly ambiguous on the issue of what kinds of facilities would have to obtain State permits. We believe the bill should clearly limit the proposed permit program to operations that collect and/or receive waste for the principal purpose of disposing of it by burying or burning. ISRI knows of no State in which scrap processing facilities are required to obtain permits for non-hazardous waste activity like those applicable to landfills or incinerators. Indeed, three major States have recently adopted solid waste recycling legislation or regulation—Florida, Pennsylvania, and New York—and those States rejected permitting requirements for recycling facilities. We see no justification for Congress to consider extending the permitting requirements to recycling.

Two, assured access to disposal capacity for the wastes which recycling operations inevitably generate is a basic prerequisite to viable recycling. To maintain existing levels of recycling, let alone increase the recycling from municipal solid wastes, it will be essential for the States' long-term solid waste management plans to assure disposal options for recyclers' wastes. Recycling inevitably generates unrecyclable residues.

A case in point is the automobile which typically contains several hundred pounds of nonmetallic materials which become waste when the 2,000-plus pound vehicle is fragmentized for recycling. The total waste potential of an automobile, therefore, is reduced by 80 percent or more. It is also obvious that ready access to cost-effective waste disposal is absolutely essential to economic recycling.

Given the waste volume reduction which recycling achieves, it is appropriate to ask assurance of disposal capacity for these recycling residues, if necessary by creating a preference for such wastes as compared with non-recycled wastes.

Third, demand-side incentives for increased recycling are essential. We recognize it has been difficult for State and local governments to resist the public plea to do something to alleviate the solid waste crisis, even if doing something is legislating supply-side incentives. Supply-side measures mandate collection of source-separated materials. Supply-side measures provide Government funds via grants or low interest loans to add collection and processing capacity, but more collection and processing of recyclables does not necessarily create increased purchases of recyclables for reuse. We hope Congress resists that simplistic approach.

Congress' recycling goals can best be achieved if two features are stressed in legislation. One is the contribution of the existing scrap processing and recycling industry in moving diverted materials to market and its ability to do even more. Second is the need for manufacturers to expand their purchases of secondary materials as product inputs.

Fourth, design standards for products that enhance rather than impede safe recycling must be encouraged. ISRI understands the policymakers' oft-stated concern that recycling be accomplished in an environmentally sound manner. This legislation can take a giant step in that direction by making certain that manufacturers consider the recyclability of their products during the product design project. By shifting away from the use of nonessential hazardous constituents that impede safe recycling of obsolete products we will begin to address one of the most avoidable barriers to recycling.

We thank you, Mr. Chairman, for the opportunity to present these brief, general comments concerning this important legislative step designed to ensure maximum recycling. We recognize the extent of the significant thought process represented in specific sections of S. 2773, some of which we believe need to be refined and/or enlarged. For example, the downstream Superfund exemption for battery recycling is a welcome first step that could lead to the much-needed recognition that certain environmental regulations are creating an atmosphere counter to the maintenance, much less expansion, of recycling activities.

We applaud the recognition of these problems and many of the suggested range of solutions. We look forward to working with the committee to pursue these items in the interest of maximizing recycling.

Thank you.

Senator BAUCUS. Thank you.

Mr. Fortuna?

STATEMENT OF RICHARD FORTUNA, EXECUTIVE DIRECTOR, HAZARDOUS WASTE TREATMENT COUNCIL

Mr. FORTUNA. Thank you, Mr. Chairman. I appreciate the opportunity to testify this morning.

As you know, the Treatment Council is a group of commercial hazardous waste management firms and equipment manufacturers who provide high tech solutions to the Nation's waste management problems. Our traditional emphasis has been on hazardous waste management, but increasingly the members in our group are being requested by State and local governments, as well as generators of infectious waste, to assist in providing technology-based facilities for the management of infectious waste. However, the current mosaic and rapid flux of State regulations in light of recent events creates a difficult environment for technology-based firms to plan intelligently for infectious waste management.

There are vast disparities in the regulatory controls that exist at the State level. Just as occurred with hazardous waste in the late 1970's, a set of national minimum standards is necessary for certain key elements of an infectious waste program to ensure that we do not have a proliferation of waste havens. For example, you heard this morning about New York's program. Connecticut has virtually nothing. In my testimony I talk a good bit about what Oklahoma has recently done in various aspects of infectious waste management, including incineration. Texas has virtually nothing.

Firms are loathe to make massive investments in technology-based facilities, as is being requested of them, unless they know there is a set of national minimum standards that will indeed provide for a level playing field across State boundaries.

Perhaps the best bellwether of the infectious waste problem is found in the rapid development of legislation at the State level. Currently Michigan, Alabama, and Utah as we speak are finalizing plans for legislation to implement a State infectious waste program. Of particular note, however, is the fact that just this spring, in response to a Council of Governments survey on infectious waste regulations, none of these States said that they had any plans to do so.

State approaches are varying across the board. If you look simply at incinerator standards, Oklahoma has just passed a series of regulations in April specifying that the minimum temperatures are 1,400 degrees to 2,000 degrees in the various chambers of the incinerator for the minimum retention time of two seconds. Missouri's standards that were just passed in March of this year are vastly different.

Definitions of infectious waste are all over the map, including anything that derives from a hospital to anything that contains an infectious agent to only those things that contain pathogens. Examples of both Rhode Island's definition and Illinois' definition are provided for the committee's review.

Several States mandate treatment, while others do not. New Hampshire's rule states that "all infectious waste shall be adequately treated before disposal." Pennsylvania states that "infectious waste may not be disposed of in municipal waste landfills unless treated." Several States have small quantity exemptions; others do not.

Interestingly, Mr. Chairman, we have checked with several States and many of them are truly awaiting a national program. Montana, one that we just chose randomly, is supportive of a Federal baseline program because the manpower in the State is at a premium and regulatory development is a very time-consuming process. Idaho and Utah expressed similar concerns.

We believe that there are several key elements of a national baseline program, many of which are contained in your legislation, Mr. Chairman. We need a national definition of both biomedical waste and infectious waste. They are not mutually inclusive categories. There need to be requirements for segregation, packaging and labeling, as well as for storage. In fact, many of the particular harms associated with infectious waste may well occur through storage as well as through disposal.

We need to have simple recordkeeping and tracking requirements, as well as requiring the treatment of certain forms of infectious waste before they would be land-disposed.

We also need a national set of minimum performance standards for infectious waste incineration. We cannot continue to have a proliferation of vastly differing requirements that dictate different types of technologies and different approaches.

We also need to establish a system for delegating a State program with adequate monies to develop these regulations, as well as perhaps providing for a citizen suit to compliment State-level enforcement.

One other thing that I would like to mention specifically this morning, Mr. Chairman, is to compliment you on including a provision in the legislation to provide resources for both infectious waste programs as well as solid waste and recycling programs, because I think that the lack of resources is really at the heart of what we see as the growing tension between Federal and State programs. I think the approach provided in the bill is certainly one way of doing so, by imposing a fee, if you will, on certain forms of plastic packaging.

I just note in the recent issue of the Montgomery Journal two weeks ago that they cite two specific programs that Montgomery County is considering patterned after a Suffolk County program to specifically prohibit certain forms of packaging from being land-disposed. I understand that New Jersey, according to this article, charges a 2 percent tax on single-use nonrecyclable packaging.

Congressman Weldon, who has the Congressional district just south of Philadelphia, had a seminar on hazardous waste and solid waste recycling last week in which he highlighted Delaware County's program. They have recycling targets for each one of the municipalities within Delaware County. In order to have access to the municipal landfill the municipalities within the county have to demonstrate that they are able to meet certain recycling goals for plastics, paper, and glass, and if they do not meet those targets they are then charged a higher rate or tipping fee into the municipal or county landfill. That is certainly another mechanism to go about funding this program, as well as to broaden the base of the tax beyond just plastic packaging to perhaps all solid waste refuse.

We also support a number of the other key provisions within the legislation, Mr. Chairman. In closing I would simply say that we look forward to working with you on this legislation as well as many of the issues that need to be addressed under subtitle (C), including the proper controls on all forms of hazardous waste recycling, better clarifying the definition of hazardous waste, as well as providing streamlined permitting mechanisms to provide the necessary capacity for this Nation's waste management needs.

Thank you.

Senator BAUCUS. Thank you very much, Mr. Fortuna.

Under the rules of the Senate a Senator may object to a committee meeting two hours after the Senate goes into session. This subcommittee received notice a few minutes ago that such an objection has been raised; the two hours expired about seven or eight minutes ago, so I'm going to keep my questions very brief. In deference to the witnesses who have expended time and effort to prepare and to come here, I am going continue the hearing for a very brief period of time.

Senator CHAFEE. Mr. Chairman, I hope you make it clear that nobody present in this room objects.

Senator BAUCUS. That's correct, but there's a little tension on the floor of the Senate between the minimum wage legislation on the one hand and other Senators who feel that judicial nominations are not coming to the floor as expeditiously as they should.

Anyway, the Senator is absolutely correct. A Senator, not on this committee, is apparently objecting to any committee meeting two hours past the commencement of the Senate going into session.

I have a very basic question. I appreciate the very broad-based and deep support that all the witnesses have expressed for the approach taken in this legislation. Of course there are refinements, and many of you have suggested refinements; in fact you, Mr. Harvey, implied some ways to make better markets for recyclable materials. Mr. Cutler, you did the same with respect to scrap metals. You made some very interesting comments.

The very basic question I have, though, is whether there are any specific provisions in this bill which any of you object to. I know you can come up with refinements, but are there any specific provisions which any of you object to?

Mr. BANKS. Senator, it's a very detailed and complex bill, and I'm sure as we review it in the months ahead and discuss it with staff we will find any number of things that we would like to improve and change.

One thing stands out for our interest at the moment. There are continuing discussions, as you know, with the staff on how best to regulate air emissions and ash disposal from resource recovery facilities. The provisions in your proposal may or may not reflect the evolution of those discussions with our technical experts and your staff, and I'm hard pressed to say that the language in there today is where we'd like to see it come out at the end of the day.

Senator BAUCUS. OK. That's the question.

Mr. WINGERTER. Mr. Chairman, on behalf of the National Solid Waste Management Association, virtually all elements of the bill are very encouraging. We are very supportive.

We would just like to mention that we think that in the legislation and in the supporting hearings coming up, that EPA needs to receive a clear mandate on this legislation. It also needs the adequate budget resources to implement this legislation.

Senator BAUCUS. But there's nothing that jumps out in this bill to which you object?

Mr. FORTUNA. I would just say, Mr. Chairman, that perhaps we are reserving judgment on the waste minimization component of the program in terms of the absolute goals, whether or not the percentages are correct or whether or not that may be the optimal approach. But I would say that we are reserving judgment on that at present.

Senator BAUCUS. That's obviously a provision of the bill that is going to have to be worked on because it is so new, and therefore it's going to require a lot of work.

Mr. HARVEY. Mr. Chairman, on the export of solid waste, we would like to have that defined, as Mr. Cutler mentioned, so that we know what you are considering waste to be compared to what we consider waste to be. If I have a buyer in the Far East that will take mixed office waste, which in a sense is a solid waste, I would like an opportunity to ship it to him.

Mr. CUTLER. I certainly would echo what Mr. Harvey said about exports. In addition to the points we raised in the testimony a few moments ago—we're not objecting—we think they need refinement. We see nothing that we would object to.

Senator BAUCUS. Thank you very much. We will continue to work with you, obviously, the rest of this year and into next.

Senator Chafee?

OPENING STATEMENT OF HON. JOHN H. CHAFEE, U.S. SENATOR FROM THE STATE OF RHODE ISLAND

Senator CHAFEE. Thank you, Mr. Chairman. I have a statement that I will place in the record.

[Senator Chafee's statement follows:]

OPENING STATEMENT OF HON. JOHN H. CHAFEE, U.S. SENATOR FROM THE STATE OF RHODE ISLAND

At the outset let me commend the able chairman of this subcommittee, Senator Baucus, for holding this hearing on legislation which seeks to address, in a comprehensive fashion, the solid waste crisis in our Nation.

Although this problem is most acute in the more heavily populated Northeast, no region of the country is without problems. Florida needs to acquire 2,700 acres of landfill space each year, just to keep up with waste generation. Most landfills in

Minnesota have less than five years of capacity, and Los Angeles is expected to run out of landfill space by 1993.

Clearly this is a problem which requires national attention. Certain States, such as Rhode Island and New Jersey, are in the forefront, and have adopted laws requiring mandatory recycling of wastes. Other States, however, have not begun to address the problem. The medical waste which blighted our beaches this summer has served to point out serious gaps in State laws governing the handling of solid waste. State and Federal efforts to formulate a solution to the solid waste problem have been haphazard and uneven.

The solid waste issue will be one of the major agenda items for this committee to address next year: How can we safely and efficiently dispose of the mountains of garbage we produce on a daily basis? How can we minimize the amount of waste we produce in the first place, and what policies and incentives are going to encourage the recycling of millions of tons of plastic, glass, aluminum and paper?

These issues will be the subject of an intense national debate, today, and in the next session of Congress. I, along with Senator Baucus and other members of this committee, am committed to developing sound, reasoned legislation which will provide this country with the leadership it needs in this critical area.

I look forward to hearing informed testimony on this subject from our witnesses. Thank you for coming.

Senator CHAFEE. One of the questions that came up—I believe it was from Mr. Harvey—about the fact that newspaper demand of recycled paper can't keep up with the production of newspapers, and thus that's engulfing you—is there anything that can be done about that? Are used newspapers recycled for further newsprint, or do they go into some other kind of material?

Mr. HARVEY. Not knowing that much about the process that is used after it leaves my plant, I believe that it goes into another process. There are some mills that will de-ink used newspaper and make new newspaper out of it, but I believe it makes a lower grade of newspaper. It usually goes into another process. It goes into a liner board mill. It can be used to make egg crates. There are many different things that it is used for.

Senator CHAFEE. Was there much discussion given to plastics here? It seems to me that it is plastic material, which is nondegradable, that is overwhelming us in many of the land fills at home. Everything seems to come in plastic now, whether it's milk or juice or whatever it might be. Is there any recycling that can be done to plastic? People constantly tell us that they can use it in sleeping bags, but there is a limited demand for sleeping bags in the United States, I gather. What else can be done with it?

Mr. CUTLER. One of the main problems, Senator, is that many of the plastic applications are combinations of plastics. Once you put plastics together, we know of no really viable recycling market that exists today. The viability of the plastic recycling business today is in recycling what you might consider a "pure plastic" where you take it back, you know its composition, there is no separation involved, and it becomes a usable product.

In terms of the mass amounts of plastics, say in an automobile, for all intents and purposes there is no recycling of that plastic at all because it is a mixture and no one knows how to separate those mixtures.

Mr. FORTUNA. I have a different point of view, Senator Chafee. We have a member in California who has a rather viable recycling market, and the things they take in are the milk bottles and the pop bottles and these types of things, to recycle that directly back into making new products of the same type or related types of products. Unfortunately, the market demand for that fluctuates indirectly with the underlying costs of the raw material to make the new product.

Senator CHAFEE. As the price of oil goes down there's less demand?

Mr. FORTUNA. That's correct.

Senator CHAFEE. I think it was Mr. Cutler that said we should encourage manufacturers to expand their purchase of secondary materials. But how can we encourage manufacturers, outside of verbal encouragement?

Mr. CUTLER. One of the suggestions, Senator, is in the bill, namely the procurement standards which would establish a recognition that at least in the minds of the governments of this country, the recyclable is as good as or better than the virgin counterpart. I believe it was said here by a couple of the witnesses that there is a need to establish a baseline, that there is a clear assured demand for these recyclable materials because the governments of this country at a minimum have gone through the standard testing procedures and have established that they meet those requirements. The next step then, obviously, would be to pass that information and education forward so that others—you and I as purchasers in the end—would start asking for materials made of recycled items, whereas today the tendency is to encourage us to buy items made of virgin material. We look at labels in our suits or markings on our products and we see that the words "virgin materials" are always stressed. That whole ethic has to be revisited.

Senator CHAFEE. Well, what about tires, for example? I am told that there are two ways to dispose of tires. One is to burn them at a very high temperature, which has emission problems, and the other is to grind them up; then, I am informed, they can be used for road materials. Is that true?

Mr. CUTLER. We do not represent anyone in the tire recycling industry. I know of both of those options, but we do not represent people doing that.

Senator CHAFEE. But I suppose, following along with what you said, if we mandated specifications in Federal road construction something that dealt with ground-up tires, we would be creating a market to get rid of that?

Mr. CUTLER. Assuming there is no problem, and I am certainly not an expert in that application, that would be a way to do it.

Senator CHAFEE. Well, I just want to say, Mr. Chairman, that I commend you for these hearings. We are heading down a road that is a complicated one but it's certainly one we've got to deal with. I want to commend you and I want to commend these gentlemen from the industries that they are in. You people are very important to American society today and we applaud you for what you are doing.

Thank you, Mr. Chairman.

Senator BAUCUS. Thank you, Senator.

Senator Breaux?

Senator BREAUX. Well, I'll try to be very brief before the committee cops come in and close us down.

We had a lot of discussion on recycling, and I'm really trying to determine whether we have different procedures if you are a solid waste handler as opposed to a person that handles solid waste not for landfilling, but for recycling. I am particularly interested in the different standards that apply to an incinerator in the hazardous waste area as opposed to being a recycler.

Are there different standards that you have to follow under RCRA if you are classified as a person who handles solid waste for purposes of disposing it as opposed to handling it for purposes of creating some other product and being called a recycler?

Mr. FORTUNA. Yes, sir. Depending on the type of recycling that you engage in, there are rather vast disparities in the levels of control. I think the Congress took a major step in 1984 to try to control so-called recycling practices involving burning, to try to establish equivalent levels of control to incineration. Those regulations still have not been issued, although the deadline was two years ago.

There are many other forms of recycling where people are using pollution control dusts and putting them directly into fertilizers. There are other types of waste reuses that are totally uncontrolled that arguably are gaps not only as a result of gaps in the regulation, but gaps in the law.

Senator BREAUX. It seems to me from a public health standpoint that the concern that I would have would be the health of the public and not whether the process is being used for the purpose of doing something with the product, i.e. destroying it, or doing something with the product to recycle it and sell it. Do any of you disagree with that?

Mr. BANKS. Senator, we would certainly support that point of view. I think you've put your finger right on one of the biggest problems with the implementation of the hazardous waste section of RCRA. It's not a complex, difficult problem; it's a very simple one. There are a number of large scale burners handling hazardous wastes outside the RCRA system and not regulated as incinerators. It is not something that needs a complex, esoteric, definitional solution. It needs a simple statement of law, that if you're going to burn hazardous wastes, at least solids without much fuel content to them, you have to get a RCRA subtitle (C) permit, operate as an incinerator, and the residual coming out the back end of that device, whether you call it a product or an ash or an aggregate or, as you mentioned earlier, a gold bar, is nonetheless a hazardous waste until you can demonstrate that it is safe enough to be disposed of outside the hazardous waste system. That's not a difficult thing for this law to say, and we would be very interested in working with you to see if this reauthorization process can get that principle in place.

Senator BREAUX. Well, what gap or hole in the existing RCRA legislation allows anyone to not have to comply with the hazardous waste incineration standards if in fact they show that they are a recycler, even though they are burning hazardous wastes?

Mr. BANKS. It is a murky area of the law only because EPA has been unwilling to apply the basic principles. There are burners claiming to be recyclers who will say that the material they take in is a raw material and the residual coming out the back end is a product. They will say this is the Solid Waste Disposal Act, an act to deal with wastes, not products and raw materials.

It's all in the nomenclature, and that's what needs to be cleared up in this law.

Senator **Breaux**. If any members of the panel, on my last point, can help in providing some suggestions as to how that gap or loophole in the law can be closed, I would appreciate it. I think the majority of the Members of Congress would probably feel it should be closed. The burning of hazardous waste for any purpose I think should be regulated as a hazardous waste incinerator.

Mr. **Cutler**. Senator, if I may, I think it's also important to keep before us the distinction between hazardous waste and nonhazardous waste when you're talking about recycling and disposal. The issues you're raising are in the hazardous waste recycling and disposal area, and one of our concerns which I tried to articulate at the beginning is that those regulations—permitting and other things—that might be considered, not be carried over into the nonhazardous waste recycling area unless there is justification for it.

Senator **Breaux**. I appreciate that.

Senator **Baucus**. Thank you gentlemen, very, very much. You have been very, very helpful. As I said earlier, we are going to be dealing with this issue for some time, so I am sure there will be a lot of other communications.

Senator **Baucus**. The hearing is adjourned.

[Whereupon, at 11:52 a.m., the subcommittee was adjourned, to reconvene at the call of the Chair.]

[Statements submitted for the record and the bill S. 2773 follow:]

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CATHY REYNOLDS
COUNCILWOMAN-AT-LARGE
DENVER, COLORADO

on behalf

THE NATIONAL LEAGUE OF CITIES
THE WASTE MINIMIZATION AND CONTROL ACT OF 1988

before the

SENATE ENVIRONMENTAL AND PUBLIC WORKS COMMITTEE

September 22, 1988

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Mr. Chairman, members of the Subcommittee: I am Cathy Reynolds, Councilwoman-at-Large from Denver, Colorado and immediate past president of the National League of Cities. I am here today to testify on behalf of NLC and the 15,000 cities and towns across the nation that we represent on the draft proposed legislation entitled, "The Waste Minimization and Control Act of 1988."

Increasingly the nation's cities and towns are finding it more and more difficult, and in some cases impossible -- to wit, the infamous garbage barge -- to deal appropriately and effectively with this most basic municipal service.

I say this with special concern, Mr. Chairman, because at the municipal level it seems that at almost every turn federal actions are making our job more difficult.

For example, we are deeply concerned about retroactive provisions in the House Technical Corrections bill which have already interfered with financing of environmental and infrastructure facilities in some 25 states and directly contradict the intent of this committee in setting up state revolving loan funds under the Clean Water Act.

We appreciate, Mr. Chairman, your leadership as acting-chairman of the Senate Finance Committtee in not including such a provision in the Senate bill or amendment. Yet, as long as the House provision is pending, it has the effect of law, interfering directly with public programs and services under the primary jurisdiction of this Committee.

I hope -- we hope -- Mr. Chairman, that the Senate will send an unmistakeable message to the House that retroactive intereference into long-standing state and municipal programs for clean up and public infrastructure is simply unacceptable.

While appropriate concerns have been raised about the implications of various strategies available to municipalities to dispose of solid waste, pushing municipalities to the point where they will be unable to cope at all with trash disposal has enormous implications that will pose the ultimate threat to human health and the environment. As Dr. Bruce Wallace of VPI said in a recent article: "an interruption in the outward flow of wastes quickly inundates a city in filth."

On behalf of the nation's municipal elected officials, we are pleased to note the new-found interest on the part of the federal government -- both the Congress and EPA -- in one of the most pressing and controversial local issues we elected officials confront every day: disposing of solid waste.

There are indeed a number of areas where federal involvement is essential if we are to have a positive affect on how we deal with municipal solid waste. You are to be commended, Mr. Chairman, for the positive steps you have taken in your pending proposal to deal with these issues.

First, source reduction can only be accomplished with the full particiation of the federal government. While local governments can have limited impact on reducing the amount of waste in a given community, we have little, if any, control over products that come into our community. And we certainly have no authority to mandate the contents of manufactured products, even if they are manufactured within our boundaries. Federal leadership must be exercised in establishing packaging standards for manufacturers, distributors and retailers and in removing, or at least reducing, from the waste stream packaging and products which are toxic, not recyclable and/or biodegradable.

Second, federal participation in encouraging recycling by creating markets for such products is also essential to the success of a nationwide recycling program. The proposed bill which mandates that federal agencies and contractors use recycled goods provides a significant initial impetus to ensuring the creation of markets for such goods.

Many municipalities and several states have already taken the initiative in implementing and encouraging recycling to reduce the waste stream. But without adequate markets for these products, we will merely develop an alternative solid waste management practice -- warehousing of products for which there is no use.

We do not, however, believe Congress should impose a percent recycling mandate. Every community is different and what one community can accomplish with little effort another may be incapable of doing. You know and I know, there are parts of some cities where garbage isn't even put in bags or cans. Twenty-five percent recycling isn't going to happen in these communities in the short term. If the differences among communities are respected, and each is encouraged to accomplish national goals, we believe you will be far more successful than if you establish a mandate that cannot be met.

Third, NLC also believes Congress must establish appropriate requirements for both air emissions from municipal incinerators and for ash disposal to assist us in assuring our citizens that this method of waste reduction is protective of human health and the environment.

Municipalities across the country are attempting to deal with their own particular solid waste disposal crisis by investing substantial local resources in the construction of incinerators and ash disposal facilities. We cannot afford -- either from the financial perspective, or more importantly, from the perspective of assuring our citizens that these necessary facilities are safe -- to find these investments inadequate after the fact. We need to know what standards and criteria must be included in these facilities, both to protect the public health and safety, and to enable municipalities to site and build such facilities.

Standards and criteria for municipal incinerators must, however, be rational and must reflect what can actually be accomplished, not someone's idea of what would be nice.

We must also be given adequate time to comply with any new incinerator or other solid waste disposal requirements. It must be recognized that existing municipal solid waste disposal practices cannot be changed overnight. While the time it takes to construct or retrofit a given facility can be determined in a reltively straight-forward way, this does not take into account the need to site, to finance, or to permit a new facility. When developing retrofit or closure mandates, you must keep in mind that we have garbage every day and that we must do something with it in the interim.

Suggesting that we take it to an existing facility that meets the new criteria during the interim is not necessarily a viable option. If there is an existing facility that meets federal criteria in another political subdivision, you may not assume they will be willing to take another local government's wastes, even for the short term.

As elected officials, we are keenly aware of potential liability concerns. You may therefore, assume that many cities will be reluctant to transport their wastes outside of their boundaries because of the ever-present threat of future designation as the principal responsible party should that facility at some point be designated a Superfund site.

Pleased as we are with the federal government's new interest in solid waste, we think its necessary to point out that any involvement by the federal government in solid waste disposal issues -- whether it be in the form of legislation, regulations and/or financial assistance -- must recognize that solid waste disposal is uniquely a local government responsibility. For federal efforts to be successful, it is essential that you involve local officials in a significant and meaningful way in every step of the process.

In developing environmental legislation, Congress must approach municipalities from a more positive perspective than has been the case to date. We perceive that the Congressional attitude toward municipalities, based on what we see in this and other environmental legislation, is that we must be bludgeoned, or at least coerced, into compliance with federal environmental laws. This attitude does not recognize that cities -- unlike the private sector -- are entities in perpetuity. We don't pick up and move somewhere else if things get too messy. You must begin to understand that we care about the ambience of our communities. After all, we local officials live there. Second, the future of our communities involves a perception about the quality of life and if that perception is bad, we have a dismal future indeed.

The legislation pending before you, while citing as an objective, "establishing a partnership," stops at the state level and makes no mention of local governments as an equally essential part of the partnership that will ensure "waste management capacity protective of human health and the environment."

By way of example, a major flaw in the proposed legislation from our perspective is that it provides no role for local officials in the development of regulations. I would commend to your attention and recommend inclusion of language in bills pending before the House Energy and Commerce Committee on municipal incinerators (H.R. 4357 and H.R. 4902), both of which mandate participation by local governments in the development of regulations. ("In carrying out this section the Administrator [of EPA] shall consult with general purpose local governments and designated organizations of elected officials of local government.")

Another example is the language in the proposed bill which "reserve[s] to the state authority to take such actions on behalf of a regional or local planning unit as are necessary to assure the availability of such capacity when such planning unit has failed in a timely way to provide adequate capacity or other mechanisms for dealing with the waste for which such unit is responsible..."

As I mentioned, solid waste disposal is a uniquely local responsibility. And while it is clear that many municipalities are confronting a crisis and need assistance from their sister levels of government, to set up a confrontational structure can only lead to failure. We believe it is more productive to the goals of effective solid waste management to foster cooperative arrangements among levels of government than to pit one against the other. Planning for solid waste management will be effective only if local governments have a voice in and the ability to impact on the planning process. At a minimum, to be acceptable, state solid waste management plans must demonstrate that local government officials were involved in their development.

You must also understand that we do not have unlimited resources and that there are many, equally meritorious claims on the resources we do have. Much of the innovation in this country comes from the local level, and that creativeness can be accessed best if we have a role in developing what can and should be done. There must also be recognition of the differences across the nation: in demography, in climate, in geography, in hydrogeology; and that the proverbial one size, in this case, does not fit all.

Another concern with the proposed bill is its penalty provisions. While we could argue the appropriateness of the federal government penalizing local governments for noncompliance while at the same time the federal government provides municipalities with no recourse to enforce against federal facilities that pollute our cities, or the severe difficulties Congress has imposed on our ability to finance municipal services -- be they federal mandates or otherwise -- in recently enacted tax reform measures -- the financial penalties in the bill do little, if anything, to improve the environment in the communities being penalized. We believe it makes more sense to target financial penalties assessed on local governments, through the use of a dedicated fund administered by either the state or EPA, to environmental purposes in the community being penalized. Again, I will cite the House proposals, H.R. 4357 and 4902, which have acceptable and sensible penalty provisions. In this way, at least, the taxpayers in the community will benefit from their local government's expenditure.

Mr. Chairman, I appreciate the opportunity to present NLC's views before your committee. I would like to request that the proposed policy recommended by NLC's Energy, Environment and Natural Resources Steering Committee on solid waste be included in the record. I would also like to assure you that we are more than willing to continue to work closely with you and your staff in ensuring the development and enactment of workable and productive solid waste management legislation. I would be pleased to answer any questions. Thank you.

TESTIMONY OF

THOMAS C. JORLING
COMMISSIONER OF ENVIRONMENTAL CONSERVATION
STATE OF NEW YORK

AT A PUBLIC HEARING

BEFORE THE

HAZARDOUS WASTE AND TOXIC SUBSTANCES SUBCOMMITTEE
OF THE UNITED STATES SENATE COMMITTEE ON
ENVIRONMENT AND PUBLIC WORKS

THURSDAY, SEPTEMBER 22, 1988

9:30 A.M.

ROOM SD-406
DIRKSEN SENATE OFFICE BUILDING

WASHINGTON, D.C.

TESTIMONY

INTRODUCTION

GOOD MORNING. MY NAME IS THOMAS C. JORLING. I AM COMMISSIONER OF ENVIRONMENTAL CONSERVATION FOR THE STATE OF NEW YORK.

AMONG THE VARIOUS RESPONSIBILITIES OF MY DEPARTMENT IS THE REGULATION OF SOLID WASTE MANAGEMENT FACILITIES IN NEW YORK STATE. I APPRECIATE YOUR HAVING INVITED THE STATE OF NEW YORK TO BRING THE YEARS OF EXTENSIVE EXPERIENCE THE ASSUMPTION OF THAT RESPONSIBILITY HAVE YIELDED, TO BEAR UPON THE REVIEW OF YOUR BILL, MR. CHAIRMAN, THE PROPOSED "WASTE MINIMIZATION AND CONTROL ACT OF 1988".

WITHOUT ARGUMENT, THE PROPER MANAGEMENT OF SOLID WASTE IS NECESSARY TO PROTECT THE PUBLIC HEALTH AND WELFARE OF THE NATION'S CITIZENRY AND THE ENVIRONMENT. TOWARD THIS END, IT IS NECESSARY TO REDUCE THE GENERATION OF SOLID WASTE, TO ACCELERATE THE RECOVERY AND REUSE OF SECONDARY MATERIALS FOUND IN THE NATION'S WASTESTREAM, TO ENCOURAGE THE CONSERVATION OF RESOURCES, TO FOSTER PUBLIC AND PRIVATE INITIATIVES TO ACHIEVE THOSE ENDS, AND TO ENCOURAGE A NEW ETHIC AMONG THE NATION'S GOVERNMENTS AND CITIZENRY TO CONSERVE AND REUSE, RATHER THAN DISCARD, USEFUL MATERIALS. SIMPLY PUT, WE MUST MAKE A TRANSFORMATION FROM THE THROWAWAY SOCIETY WE BECAME OVER GENERATIONS TO A CONSERVING RECYCLING SOCIETY.

AS EVIDENCED BY ITS ENACTMENT OF THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976, CONGRESS HAS ALREADY LAID THE NECESSARY FOUNDATION FOR ATTAINING THESE OBJECTIVES. WHAT IS NOW NEEDED IS

A REFINEMENT OF WHAT CONGRESS HAS INITIATED, AND THE DEVELOPMENT AND ENHANCEMENT OF THE STATE-FEDERAL PARTNERSHIP SO VERY MUCH NEEDED IF THE EFFORT IS TO SUCCEED.

THE PROPOSED WASTE MINIMIZATION AND CONTROL ACT OF 1988, PRESENTLY UNDER CONSIDERATION, CONSTITUTES A MAJOR STEP IN THE RIGHT DIRECTION TOWARD PROVIDING THAT REFINEMENT AND ENHANCEMENT.

COMPARISON OF BILL'S AND NEW YORK STATE'S SOLID WASTE MANAGEMENT PROGRAMS

IN ACTUALITY, THE PHILOSOPHY BEHIND, AND MANY OF THE POINTS IN, THE PROPOSED WASTE MINIMIZATION AND CONTROL ACT OF 1988 ARE ALREADY EMBODIED IN THE LAW, POLICY AND REGULATION OF MY STATE. FOR EXAMPLE,

- THE SOLID WASTE MANAGEMENT HIERARCHY SET FORTH IN SECTION 102(E) OF THE BILL IS THE SAME AS THAT SET FORTH IN SECTION 27-0106 OF THE NEW YORK ENVIRONMENTAL CONSERVATION LAW. (I ALSO REFER YOU TO A SIMILAR HIERARCHY PERTAINING TO HAZARDOUS WASTE MANAGEMENT SET FORTH IN SECTION 27-0105 OF THE NEW YORK ENVIRONMENTAL CONSERVATION LAW.)
- THE CONCEPT OF STATE SOLID WASTE MANAGEMENT PLANNING CONTAINED IN TITLE II OF THE BILL IS PROVIDED FOR IN SECTIONS 27-0103 AND 27-0107 OF THE NEW YORK ENVIRONMENTAL CONSERVATION LAW.
- THE ENVIRONMENTALLY PROTECTIVE SOLID WASTE MANAGEMENT GUIDELINES CALLED FOR IN SECTION 204 ARE IN LARGE PART

CONTAINED IN PROPOSED PARTS 219 AND 360 OF THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION'S REGULATIONS.

- NEW YORK'S ANALOGUE TO SECTION 206 OF THE BILL, WHICH RELATES TO SOLID WASTE EXPORT, IS SET FORTH IN PROPOSED SUBDIVISION 360-11.4(b) OF THE DEPARTMENT'S PROPOSED PART 360 REGULATIONS.
- THE RECYCLING GOALS SET FORTH IN SECTION 301 OF THE BILL ARE SIMILAR TO NEW YORK'S SOURCE REDUCTION/RECYCLING GOAL OF 50 PERCENT SET FORTH IN ITS SOLID WASTE MANAGEMENT PLAN.
- THE OFFICE OF WASTE MINIMIZATION PROPOSED TO BE ESTABLISHED WITHIN THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY ("USEPA") UNDER SECTION 302 OF THE BILL HAS POWERS ANALOGOUS TO THOSE, AT THE STATE LEVEL, OF THE DEPARTMENT'S BUREAU OF WASTE REDUCTION AND RECYCLING.[1]
- ESTABLISHING A WASTE REDUCTION AND RECYCLING CLEARINGHOUSE UNDER SECTION 304 OF THE BILL IS PROVIDED AT THE STATE LEVEL BY THE AFOREMENTIONED BUREAU OF WASTE REDUCTION AND RECYCLING.[2]
- THE EXERCISE OF THE FEDERAL PROCUREMENT POWER IN ORDER TO ENCOURAGE THE DEVELOPMENT OF SECONDARY MATERIALS MARKETS ALREADY EXISTS IN NEW YORK LAW IN A NUMBER OF PLACES.[3]
- WE ARE ADDRESSING THE CONCEPT OF ELIMINATING HAZARDOUS CONSTITUENTS IN PRODUCTS, A CONCEPT EMBODIED IN

SECTION 310 OF THE BILL, THROUGH THE PROHIBITION AGAINST INCINERATION OF HOUSEHOLD BATTERIES.[4]

- THE ECONOMIC INCENTIVE CONCEPT REFLECTED IN SECTION 402'S IMPOSITION OF A FEE ON PACKAGING MATERIALS AS A METHOD TO ENCOURAGE GREATER USE OF RECYCLED MATERIALS IN PACKAGING HAS BEEN EMBODIED IN STATE LAW FOR MANY YEARS.[5]

THE OBJECTIVES THEY SEEK TO ATTAIN ARE THOSE THE CITIZENS OF NEW YORK STATE DESIRE AND ARE WILLING TO SACRIFICE TO ACHIEVE; AND I BELIEVE THAT THE FEDERAL ANALOGUES CONTAINED IN THIS BILL WILL HAVE A SIMILAR FAVORABLE RECEPTION AND PUBLIC ACCEPTANCE. I CERTAINLY SUPPORT HAVING A FEDERAL FLOOR PUT UNDER THE PROVISIONS OF NEW YORK STATE TO AVOID HAVING ANY ECONOMIC ADVANTAGE ACCRUE TO OTHER STATES THAT MIGHT TAKE A LESS PROTECTIVE VIEW OF THEIR OWN ENVIRONMENTS.

DISCUSSION OF PARTICULARS

THIS IS NOT TO SAY, THOUGH, THAT THE BILL'S PROVISIONS DO NOT NEED ANY REFINEMENT. THEY CERTAINLY DO, AND WHAT FOLLOWS IS A SUMMARY OF THE MORE IMPORTANT CONSIDERATIONS, BASED UPON OUR EXPERIENCE IN IMPLEMENTING NEW YORK'S ENVIRONMENTAL LAWS:

A. THE BILL SHOULD CAREFULLY DELINEATE BETWEEN "HAZARDOUS WASTE" AND "SOLID WASTE". THE MANNER IN WHICH THE BILL USES THESE TERMS SUGGESTS THAT HAZARDOUS WASTE IS SOMETHING APART FROM SOLID WASTE WHEREAS IN REALITY, HAZARDOUS WASTE IS A CATEGORY OF SOLID WASTE.[6]

THE BILL QUITE OFTEN REFERS TO THE TERM "RECYCLING" WITHOUT DEFINING IT. THAT TERM MEANS DIFFERENT THINGS TO DIFFERENT PEOPLE, AND I SUGGEST EITHER DEFINING IT OR EMPLOYING INSTEAD, TERMS ALREADY CONTAINED IN THE SOLID WASTE DISPOSAL ACT, SUCH AS, IN THE PROPER CONTEXT, "RECOVERABLE", "RECOVERED MATERIAL", "RECOVERED RESOURCES", AND "MATERIAL RESOURCE RECOVERY".[7]

I NOTE THAT THE TERMS "MEDICAL WASTE" AND "INFECTIOUS WASTE" ARE USED SEEMINGLY INTERCHANGEABLY, AND THAT MAY CAUSE CONFUSION. I FAVOR THE TERM "MEDICAL WASTE".

IN EXPLANATION, LET ME EXPAND UPON OUR EXPERIENCE REGARDING MEDICAL WASTE THIS SUMMER. THE WASHUPS OF MEDICAL-TYPE WASTE ON LONG ISLAND AND NEW YORK CITY BEACHES REVEALED THE GAP IN OUR REGULATORY PROGRAM. AS WE UNDERTOOK OUR RESPONSE, WE WERE CONSTRAINED TO WORK WITHIN EXISTING AUTHORITY AND THAT AUTHORITY HAS ITS ROOTS IN THE PUBLIC HEALTH LAW ENACTED AT THE TURN OF THE CENTURY. SPECIFICALLY, IT DEFINES THE AUTHORITY TO REGULATE INFECTIOUS WASTE. INFECTIOUS WASTE IS REFERRED TO GENERALLY AS THAT MATERIAL WHICH RESULTS FROM THE TREATMENT OF PATIENTS ON ISOLATION. ISOLATION OR QUARANTINE USED TO BE A COMMON MEDICAL PRACTICE IN THE PAST. IT IS, HOWEVER, NO LONGER COMMON AND RESTRICTS THE UNIVERSE OF WASTE MATERIAL TO A RELATIVELY SMALL PROPORTION OF MEDICAL TYPE WASTE. IT IS A DEFINITION THAT CREATES A CIRCUMSTANCE THAT ONCE THE MATERIAL HAS LEFT THE ISOLATION CHAMBER IT IS INDISTINGUISHABLE FROM ANY OTHER MEDICAL WASTE. UNDER THE EMERGENCY REGULATIONS WHICH WE ISSUED THIS SUMMER, WHICH INCLUDED A MANIFEST SYSTEM, MEDICAL-TYPE WASTE IS, BY AND LARGE, CONFINED TO THE CATEGORY OF INFECTIOUS WASTE.

BOTH COMMISSIONER DAVID AXELROD, NEW YORK'S COMMISSIONER OF HEALTH, AND I AGREE THAT WE NEED TO REVISE OUR DEFINITIONS TO RECOGNIZE THE MODERN REALITIES. THE LAW MUST DEFINE A UNIVERSE OF MEDICAL WASTE THAT SHOULD BE SPECIFICALLY MANAGED UNDER A REGULATORY FRAMEWORK THAT IS COHERENT AND ENFORCEABLE. IN ORDER TO DO THAT, WE BELIEVE THAT A NEW DEFINITION OF MEDICAL WASTE IS NECESSARY. WHILE SUCH A DEFINITION WILL ENLARGE THE CATEGORY OF WASTE THAT IS INCLUDED AS MEDICAL WASTE WE BELIEVE THAT BOTH THE HEALTH CARE COMMUNITY AND THE PUBLIC WOULD BE BETTER SERVED BY SUCH A DEFINITION. WE WOULD, THEREFORE, RECOMMEND THAT THE TERM "MEDICAL WASTE" BE DEFINED AS FOLLOWS: "ANY WASTE MATERIAL RESULTING FROM (A) THE ADMINISTRATION OF MEDICAL CARE TO A PATIENT BY A HEALTH CARE PROVIDER, OR (B) THE ANALYSIS OF BODY TISSUE OR FLUIDS BY A LABORATORY FACILITY."

THIS DEFINITION IS OBVIOUSLY A STARTING POINT. IT NEEDS FURTHER REFINEMENT AND WORK. THE BASIC POINT, MR. CHAIRMAN, IS THAT WE NEED TO CRAFT A BETTER DEFINITION OF MEDICAL WASTE FOR THE PURPOSES OF REGULATION AND MANAGEMENT.

B. THE CONCEPT OF MANDATING STATE SOLID WASTE MANAGEMENT PLANNING IS INCONSISTENT WITH USEPA'S REQUIRED ISSUANCE OF PLAN "GUIDELINES" INSTEAD OF MINIMUM REQUIRED PLAN CONTENTS.

C. THE PERMIT PROGRAM DESCRIBED IN SECTION 203 APPEARS TO ENVISION USEPA'S ESTABLISHMENT OF A SOLID WASTE MANAGEMENT PROGRAM IMPOSING MINIMUM FEDERAL STANDARDS UPON THE STATES. WHILE THIS OBJECTIVE IS SALUTARY, IT SHOULD BE BUTTRESSED BY INCLUSION IN THE BILL OF A PROVISION SIMILAR TO SECTION 3009 OF THE SOLID WASTE DISPOSAL ACT[8] TO THE EFFECT THAT NOTHING IN THE WASTE MINIMIZATION

AND CONTROL ACT OF 1988 SHALL BE CONSTRUED TO PROHIBIT ANY STATE OR POLITICAL SUBDIVISION THEREOF FROM IMPOSING ANY REQUIREMENTS, INCLUDING THOSE FOR SITE SELECTION, WHICH ARE MORE STRINGENT THAN THOSE IMPOSED BY REGULATIONS ISSUED BY USEPA.

IN ADDITION, WITH REGARD TO THE IMPOSITION OF PERMIT CONDITIONS, I QUESTION A STATE HAVING TO ACCOUNT FOR APPROPRIATE REGULATIONS AND REQUIREMENTS OF OTHER STATES FOR SOLID WASTE MANAGEMENT AUTHORITIES WHEN IMPOSING CONDITIONS ON PERMITS.[9] THE DETERMINATION OF WHAT CONDITIONS TO IMPOSE UPON A PERMIT SHOULD BE INDEPENDENT OF WHAT OTHER STATES WOULD DO WHEN CONFRONTED WITH A PARTICULAR ISSUE THE CONDITION SEEKS TO ADDRESS SINCE EACH STATE'S ENVIRONMENTAL CIRCUMSTANCES DIFFER AND EACH STATE SHOULD BE ABLE TO ACCOUNT FOR ITS OWN UNIQUE ENVIRONMENTAL AND SOCIOLOGICAL CIRCUMSTANCES WITHOUT THE NEED TO DETERMINE WHAT OTHER STATES WOULD DO UNDER SIMILAR CIRCUMSTANCES.

LASTLY, I AM CONCERNED THAT THE BILL'S PERMIT PROGRAM APPEARS TO MIRROR THE RCRA SUBTITLE C PROGRAM, WHICH HAS BEEN SHOWN TO BE OVERLY COMPLEX, BUREAUCRATIC, AND DUPLICATIVE OF EFFECTIVE STATE PROGRAMS. RATHER THAN THE BILL'S CERTIFICATION PROGRAM, I RECOMMEND THAT THE BILL SIMPLY REQUIRE USEPA TO PROMULGATE MINIMUM ENVIRONMENTALLY PROTECTIVE STANDARDS TO WHICH ALL STATE PROGRAMS MUST ADHERE.

D. REGARDING SECTION 204 OF THE BILL, WHICH REQUIRES USEPA TO DEVELOP AND PROMULGATE GUIDELINES ESTABLISHING MINIMUM DESIGN AND OPERATING STANDARDS FOR VARIOUS KINDS OF SOLID WASTE MANAGEMENT FACILITIES, SUBSECTION 4011(a)(ii) SHOULD BE DELETED SINCE IT IMPLIES THAT USEPA WILL NOT BE ABLE TO DEVISE

WASTE-SPECIFIC MANAGEMENT CONTROLS AND THAT, THEREFORE, THE COMPREHENSIVE REGULATORY PROGRAM UNDER SUBTITLE C OF THE SOLID WASTE DISPOSAL ACT WOULD PERFORCE HAVE TO COME INTO PLAY. THERE ARE MANY METHODS, SOME OF WHICH ARE CONTAINED IN OTHER PIECES OF PENDING LEGISLATION (SUCH AS, CONGRESSMAN LUKEN'S PROPOSAL REGARDING MANAGEMENT OF ASH RESIDUE FROM MUNICIPAL SOLID WASTE INCINERATORS) THAT CAN ADEQUATELY ADDRESS WASTE-SPECIFIC MANAGEMENT WITHOUT RESORTING TO THE RIGOROUS MEASURES APPLICABLE UNDER SUBTITLE "C" AND WITHOUT COMPROMISING THE PUBLIC HEALTH OR ENVIRONMENT. IN ADDITION, THIS PROVISION MAY VERY WELL RESULT IN THE EXPANSION OF WASTES REGULATED UNDER SUBTITLE "C" -- NOT BECAUSE THEY SHOULD BE BUT BECAUSE OF INSUFFICIENT STAFF IN THE SUBTITLE "D" PROGRAM TO OVERSEE REGULATION OF THE WASTES ENUMERATED IN THE BILL UNDER THAT PROGRAM.

ANOTHER IMPORTANT CONCERN WE HAVE IS THE LEVEL OF TECHNICAL DETAIL CONTAINED IN THE WASTE-SPECIFIC PROVISIONS OF SECTION 204. THE DETERMINATION OF TECHNICAL REQUIREMENTS IS FAR MORE APPROPRIATE FOR REGULATION, NOT LEGISLATION: SOLID WASTE MANAGEMENT TECHNOLOGY IS RAPIDLY DEVELOPING AND TODAY'S STATE-OF-THE-ART DESIGNS CAN RAPIDLY BECOME OBSOLETE. REVISION OF TECHNICAL REQUIREMENTS CONTAINED IN LEGISLATION IS FAR MORE CUMBERSOME AND LESS RESPONSIVE TO THE NEEDS OF BOTH THE REGULATORY AGENCIES AND REGULATED ENTITIES.

1. THE TWO SUBSECTIONS 204(c) (RESPECTIVELY DEALING WITH MUNICIPAL SOLID WASTE LANDFILLS AND MUNICIPAL INCINERATOR ASH) FOR THE MOST PART CALL FOR REQUIREMENTS THAT MY DEPARTMENT PROPOSES TO IMPLEMENT IN NEW YORK STATE IN THE NEAR FUTURE. ONE OF THE MAJOR

DIFFERENCES BETWEEN NEW YORK'S PROGRAM AND THAT UNDER THIS BILL IS THAT THE BILL'S PROVISIONS RELATING TO CLOSURE AND POST-CLOSURE MONITORING AND THE MEASURE OF ENVIRONMENTAL PROTECTION, HAVE NO TIME LIMITS. THEREFORE, THE INDEFINITE NATURE OF THE BILL'S STANDARD (IN THE CASE OF LANDFILL CLOSURE, "ENSURES NO ADVERSE EFFECTS WILL BE CAUSED FROM POST-CLOSURE RELEASES"; AND IN THE CASE OF ASH MONOFILLS, "TO ASSURE THAT THERE WILL BE NO MIGRATION OF ANY CONSTITUENT INTO GROUNDWATER OR SURFACE WATER AT ANY FUTURE TIME") WILL EFFECTIVELY PREVENT ANY DISPOSAL FACILITIES FROM BEING BUILT. OTHER SIGNIFICANT DIFFERENCES BETWEEN THE PROGRAMS RELATE TO THE NEED FOR PRE-DISPOSAL TREATMENT AND ASHFILL LINER DESIGN.

IN ADDITION, I NOTE THAT THE LANGUAGE USED IN BOTH SUBSECTIONS RELATING TO LINER PERFORMANCE ("CAPABLE OF PREVENTING THE MIGRATION OF ... LEACHATE OUT OF THE LANDFILL TO THE AQUIFER ...."; AND "PREVENT THE MIGRATION OF ANY CONSTITUENT THROUGH SUCH LINER") DOES NOT REFLECT CURRENT KNOWLEDGE REGARDING LINER SYSTEM PERFORMANCE.

LASTLY, THE BILL SEEMINGLY DISREGARDS THE CONGRESSIONAL MANDATE IN SECTION 4010 OF THE SOLID WASTE DISPOSAL ACT THAT CAUSED USEPA TO REVISE ITS CRITERIA FOR LANDFILLS ACCEPTING HOUSEHOLD HAZARDOUS WASTE AND SMALL QUANTITY GENERATOR HAZARDOUS WASTE, PROPOSED AS 40 CFR PARTS 257 AND 258. THESE CRITERIA REFLECT THE PRESENT STATE-OF-THE-ART AND SHOULD BE REVIEWED CAREFULLY BY YOUR STAFF WHEN CONSIDERING REVISIONS TO THE BILL.

2. WITH REGARD TO SUBSECTION 204(D) OF THE BILL RELATING TO MUNICIPAL INCINERATOR EMISSIONS, I SUPPORT AND APPLAUD THE PROPOSED REQUIREMENTS FOR MUNICIPAL WASTE INCINERATION UNITS.

MINIMIZATION, TO THE EXTENT PRACTICABLE, IS THE PRUDENT COURSE WITH RESPECT TO EMISSIONS FROM THESE TYPES OF SOURCES. AS SUCH, THIS PROVISION IS CONSISTENT WITH AND COMPLEMENTS RECENT EFFORTS UNDERTAKEN BY MY DEPARTMENT IN THIS REGARD. THE PROPOSED CRITERIA FOR CONTROL OF EMISSIONS OF PARTICULATE MATTER, ACID GASES, OXIDES OF NITROGEN, CARBON MONOXIDE, HEAVY METALS, AND TOXIC ORGANICS ALL HAVE BEEN ADDRESSED BY MY DEPARTMENT IN ITS RECENT REGULATORY PROPOSALS. THE APPLICATION OF FEDERALLY ENFORCEABLE REQUIREMENTS WILL PROVIDE UNIFORMITY AND EQUITY FOR STATES WHICH MAY BE AFFECTED BY SOURCES BEYOND THEIR CONTROL.

SPECIFICALLY, I SUPPORT THE APPROACH OF ESTABLISHING MINIMUM STANDARDS IN THE BILL AND REQUIRING THE USEPA ADMINISTRATOR TO ESTABLISH STANDARDS FOR PERFORMANCE WITHIN THESE CONSTRAINTS. THE LIMIT OF 0.010 GRAINS PER DRY STANDARD CUBIC FOOT CORRECTED TO 7 PERCENT OXYGEN, ALONG WITH OTHER PROPOSED LIMITS, ARE FELT TO BE SOUND, ALTHOUGH STRINGENT, PROPOSALS. THE AVERAGING PERIOD FOR CARBON MONOXIDE EMISSIONS, AS WELL AS THE LIMITS FOR SULFUR DIOXIDE AND HYDROGEN CHLORIDE, MAY BE SOMEWHAT RESTRICTIVE, BUT ARE REPRESENTATIVE OF TECHNOLOGY DRIVING REQUIREMENTS, SUCH AS THOSE MY DEPARTMENT HAS ADVANCED. THE RETENTION TEMPERATURE AND TIME REQUIREMENTS ARE ALSO APPROPRIATE, ALTHOUGH SPECIFIC DEFINITION OF "FULLY MIXED HEIGHT" WOULD BE HELPFUL TO REGULATORS AND THE REGULATED.

THE BILL ALSO REPRESENTS TIMELY APPLICATION OF REQUIREMENTS FOR INCINERATION OF MUNICIPAL WASTE. THE BILL WOULD IMPOSE REQUIREMENTS ON FACILITIES IN OPERATION OR SUBSTANTIALLY COMPLETED BEFORE JANUARY 1, 1989. THIS LANGUAGE WOULD BE EASIER FOR

REGULATORS TO IMPLEMENT AND PROVIDE A MORE EQUITABLE TRANSITION IF IT WERE REFERENCED TO ISSUANCE OF A PERMIT AS OPPOSED TO UNITS THAT ARE SUBSTANTIALLY COMPLETE.

ONE ASPECT OF THE BILL WITHOUT QUALIFICATION, THOUGH, WOULD PRESENT PROBLEMS. THE REQUIREMENTS FOR DISPOSAL OF MEDICAL WASTE ARE GENERALLY VERY GOOD BUT LIMIT DISPOSAL BY INCINERATION TO CONTROLLED-AIR MULTI-CHAMBERED INCINERATORS. I FEEL THAT INCINERATION OF MEDICAL WASTE IN ADEQUATELY REGULATED MUNICIPAL WASTE INCINERATION UNITS IS A VIABLE AND APPROPRIATE MEANS FOR DISPOSING OF THESE WASTES. THE STANDARDS CONTAINED IN THE BILL WOULD PRECLUDE THE USE OF MUNICIPAL WASTE INCINERATION UNITS. MY DEPARTMENT'S EXPERIENCE WITH MEDICAL WASTE ON NEW YORK'S BEACHES THIS SUMMER INDICATES THAT ADEQUATE MECHANISMS MUST BE PROVIDED NOW FOR ACCEPTABLE DISPOSAL TO PREVENT FURTHER EVENTS OF THIS NATURE. THEREFORE, I BELIEVE THAT THE PROPER USE OF EXISTING MUNICIPAL WASTE INCINERATION UNITS FOR THE PURPOSE OF INCINERATING MEDICAL WASTE. I WOULD LIKE TO MAKE AVAILABLE TO YOU A REPORT FROM THE NEW YORK STATE DEPARTMENT OF HEALTH ON INFECTIOUS WASTE, DATED AUGUST, 1988, IN WHICH THAT DEPARTMENT PLACES AS THE MOST PREFERRED MEDICAL WASTE TREATMENT OPTION, INCINERATION AT MUNICIPAL SOLID WASTE INCINERATION UNITS (OTHER THAN REFUSE-DERIVED FUEL UNITS).

3. THE BILL PROPOSES TO MANDATE USEPA TO ESTABLISH REGULATIONS FOR DISPOSAL OF WASTES FROM ACTIVE AND INACTIVE MINING OPERATIONS. USEPA ALREADY IS DEVELOPING REGULATIONS TO COVER CERTAIN MINING WASTES, WORKING WITH THE WESTERN GOVERNORS ASSOCIATION TO INVOLVE THE STATES IN THE PROCESS.

4. I ALSO BELIEVE THAT INCLUDING OIL AND GAS WASTES AS WASTES OF CONCERN, IS UNNECESSARY. USEPA HAS JUST COMPLETED A MULTI-YEAR REVIEW OF OIL AND GAS WASTES, AND IT REPORTED TO CONGRESS THAT IN GENERAL, EXISTING STATE AND FEDERAL REQUIREMENTS ARE ADEQUATE TO CONTROL THESE WASTES.

THE BILL PROPOSES THE USE OF THE "BEST AVAILABLE CONTROL TECHNOLOGY" AS DEFINED BY USEPA FOR OIL AND GAS WASTE MANAGEMENT. I AM CONCERNED THAT IMPOSITION OF SUCH A REQUIREMENT WOULD ELIMINATE THE STRIPPER WELL INDUSTRY IN THE APPALACHIAN BASIN AND MAY CAUSE ADDITIONAL PROBLEMS BY BANKRUPTING COMPANIES, POTENTIALLY LEAVING THOUSANDS OF WELLS UNPLUGGED. I BELIEVE THAT THE STATES ARE IN THE BEST POSITION TO IMPLEMENT AN "OLD FIELDS" POLICY, BASED UPON THE SPECIFIC CIRCUMSTANCES OF THE APPALACHIAN WELL FIELDS, THAT ADDRESSES MANAGEMENT OF WASTES GENERATED FROM OIL AND GAS EXPLORATION, DEVELOPMENT AND PRODUCTION OPERATIONS UNDERTAKEN THERE.

NEW YORK HAS A STRONG AND EFFECTIVE PROGRAM TO REGULATE OVER 14,000 OIL AND GAS WELLS, INCLUDING MORE THAN 12,000 ACTIVE AND 2,000 INACTIVE WELLS. IN FACT, NEW YORK IS HOLDING SECURITY IN THE AMOUNT OF MORE THAN TEN MILLION DOLLARS FOR THE PLUGGING OF THESE WELLS PURSUANT TO NEW YORK'S FINANCIAL SECURITY REQUIREMENTS, WHICH ARE THE STRICTEST IN THE NATION. IN ADDITION, THE DEPARTMENT RECENTLY COMPLETED A COMPREHENSIVE DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT ON THE ENTIRE STATE OIL, GAS AND SOLUTION MINING REGULATORY PROGRAM. THROUGH THE IMPACT STATEMENT PROCESS, CHANGES IN THE RULES AND REGULATIONS HAVE BEEN PROPOSED TO ENHANCE THE STATE'S REQUIREMENTS TO PLUG ABANDONED OIL AND GAS

WELLS, WHICH MAY NUMBER OVER 41,000 STATEWIDE. I BELIEVE THAT ADDITIONAL FEDERAL REGULATION IS UNNECESSARY.

THE USEPA REPORT TO CONGRESS RECOGNIZES THE SPECIAL PROBLEMS OF THE APPALACHIAN BASIN, WHERE TENS OF THOUSANDS OF OLD WELLS WERE ABANDONED DECADES AGO EMPLOYING THE TECHNOLOGY OF THE TIME. A UNIQUE OPPORTUNITY NOW EXISTS TO HELP DEAL WITH THESE OLD PROBLEM WELLS. FUNDS ARE AVAILABLE TO THE STATES UNDER THE SETTLEMENTS OF PETROLEUM OVERCHARGE CASES, AND WE ENCOURAGE CONGRESS TO AUTHORIZE THE USE OF THE OVERCHARGE RECOVERY MONEYS FOR PLUGGING OLD WELLS. SUCH AN ACTION WOULD RETURN MONEYS RECOVERED FROM THE MAJOR OIL COMPANIES TO DEAL WITH THE HISTORIC PROBLEMS OF THE CRADLE OF THE OIL AND GAS INDUSTRY WHILE AT THE SAME TIME, WOULD GIVE THE STATES THE RESOURCES TO CONFRONT A SIGNIFICANT ENVIRONMENTAL PROBLEM.

E. WITH RESPECT TO SECTION 205 OF THE BILL, WE RECOMMEND INCREASING THE PER DIEM PENALTY FROM $10,000 TO $25,000, TO PROVIDE A GREATER DETERRENT EFFECT. I ALSO BELIEVE THAT THE LANGUAGE IN PARAGRAPH 4012(a)(3) RELATING TO PENALTY ASSESSMENT SHOULD BE DELETED SINCE IT UNDULY RESTRICTS THE PROSECUTIONAL DISCRETION OF USEPA.

F. I SUPPORT THE CONCEPT EMBODIED IN SECTION 206 OF THE ACT THAT WASTE EXPORTED FOR OTHER THAN RECYCLING PURPOSES MUST GO ONLY TO A NATION WHOSE GOVERNMENT IS WILLING TO ACCEPT IT.

G. REGARDING THE AMENDMENTS TO SUBSECTION 5001(a)(1) OF THE SOLID WASTE DISPOSAL ACT, PROPOSED TO BE AMENDED UNDER SECTION 301(a) OF THE BILL, IT IS LIKELY THAT USEPA OR AUTHORIZED STATES WOULD BE INUNDATED WITH WAIVER REQUESTS BECAUSE SOME

INDUSTRIES WILL OR ARE ALREADY PURSUING READILY ACHIEVABLE WASTE REDUCTION OPPORTUNITIES. I AM ALSO CONCERNED THAT SINCE EACH SIC CODE INDUSTRY GROUP (AS WELL AS EACH INDUSTRY WITHIN AN SIC CODE AND EACH PROCESS WITHIN AN INDIVIDUAL INDUSTRY) HAS A DIFFERENT "ECONOMICALLY PRACTICAL" WASTE REDUCTION POTENTIAL, THE PROPOSED 5 PERCENT STANDARD MAY BE READILY ACHIEVABLE FOR SOME INDUSTRIES OR PROCESSES AND VIRTUALLY IMPOSSIBLE FOR OTHERS.

THE CONTINUOUS MONITORING REQUIREMENTS DO NOT RECOGNIZE THE UNDERLYING TECHNICAL COMPLEXITY. FOR EXAMPLE, IT IS UNLIKELY THAT ANY CONTINUOUS MONITORING PROGRAM COULD BE DESIGNED TO MEASURE ALL THE FUGITIVE EMISSIONS FROM A FACILITY. HOWEVER, I DO SUPPORT THE INDUSTRY REPORTING REQUIREMENTS WHICH, IN LIEU OF THE MANDATORY 5 PERCENT STANDARDS, WOULD PROVIDE VALUABLE INFORMATION TO USEPA. THAT AGENCY COULD THEN DETERMINE INDUSTRY AND PROCESS-SPECIFIC WASTE REDUCTION POTENTIALS AND STRUCTURE ITS TECHNICAL ASSISTANCE PROGRAMS TO ASSIST INDUSTRIES IN ACHIEVING THIS POTENTIAL.

H. THE ESTABLISHMENT UNDER SECTION 302 OF THE BILL OF AN OFFICE OF WASTE MINIMIZATION IS AN EXCELLENT IDEA. I TRUST THAT THE FINANCIAL RESOURCES AVAILABLE TO THIS OFFICE TO HANDLE ITS RESPONSIBILITIES WILL BE ADEQUATE FOR IT TO ATTAIN ITS LAUDATORY OBJECTIVES.

I. WHILE I SUPPORT THE CONCEPT OF GRANTS TO STATES FOR TECHNICAL ASSISTANCE PROGRAMS CALLED FOR UNDER SECTION 303 OF THE BILL, MY SUPPORT IS CONTINGENT UPON THE EXTENT AND PERMANENCY OF THE FEDERAL FINANCIAL COMMITMENT TO SUCH PROGRAMS. WHEN I SAY THIS, I HAVE IN MIND THE EXPERIENCE OF THE EARLY PART OF THIS DECADE WITH RESPECT TO FEDERAL FINANCIAL ASSISTANCE TO STATE

NON-HAZARDOUS WASTE PROGRAMS, IN WHICH MUCH WAS PROMISED AND PRECIOUS LITTLE WAS PROVIDED. TO BE BLUNT, I DO NOT FAVOR AN UNDERFUNDED PROGRAM THAT SUBJECTS THE STATES TO FEDERAL REQUIREMENTS FAR IN EXCESS OF RESOURCES PROVIDED TO IMPLEMENT THEM.

J. REGARDING THE NATIONAL PACKAGING INSTITUTE CALLED FOR IN SECTION 307 OF THE BILL, THIS INSTITUTE IS A GOOD START. HOWEVER, I AM CONCERNED THAT FROM A SOLID WASTE PERSPECTIVE IT IS TOO LITTLE. THE SOLID WASTE PROBLEMS OF NEW YORK AND OTHER STATES REQUIRE STRONGER MEASURES. ALTHOUGH THE PACKAGING INDUSTRY MAY DISAGREE, STRONGER PROVISIONS MAY BENEFIT THEM ALSO IF SUCH PROVISIONS SLOW THE GROWTH OF STATE AND LOCAL REGULATION OF PACKAGING. I DO NOT BELIEVE THAT A FRAGMENTATION OF THE UNITED STATES MARKET BY STATE AND LOCAL PACKAGING RESTRICTIONS IS IN ANYBODY'S INTEREST. I ALSO BELIEVE THAT THE SCOPE OF THE NATIONAL PACKAGING INSTITUTE SHOULD BE EXPANDED TO INCLUDE DISPOSABLE FOOD SERVICE ITEMS. FURTHERMORE, I AM CONCERNED THAT PROVISIONS FOR HEAVY PACKAGING INDUSTRY REPRESENTATION ON THE BOARD OF THE INSTITUTE WILL CONSTRAIN IT FROM ADEQUATELY ADDRESSING THE CONTRIBUTION OF PACKAGING TO THE SOLID WASTE MANAGEMENT CRISIS.

K. SECTION 308 OF THE BILL IS A VERY CREATIVE PROVISION. IT WOULD PROVIDE AN ALTERNATIVE MECHANISM BY WHICH TOXIC CONSTITUENTS OF A SOLID WASTE COULD BE SIGNIFICANTLY REDUCED OR EVEN ELIMINATED. WHAT IS NOT CLEARLY ADDRESSED, THOUGH, IS THE RELATIONSHIP OF THIS PROVISION WITH THE PROVISIONS OF THE TOXIC SUBSTANCES CONTROL ACT. THIS SHOULD BE DONE, IN ORDER TO CLARIFY HOW THESE TWO ENACTMENTS SHOULD INTERRELATE.

MOST EMPHATICALLY, THE PROVISION THAT WOULD BE INCORPORATED INTO THIS LEGISLATION SHOULD NOT CARRY FORWARD THE BASIC TSCA DIRECTIVE TO REGULATE ONLY WHEN THERE IS AN "UNREASONABLE RISK TO HEALTH AND THE ENVIRONMENT". SUCH AN AUTHORIZATION LIMITS THE DISCRETION TO REGULATE TO DETERMINATIONS ABOUT IMPACT ON THE ENVIRONMENT AND ON HEALTH THAT ARE IMPOSSIBLE TO PREDICT. THE DIRECTION TO THE ADMINISTRATOR SHOULD BE THAT IF THERE IS A COMPONENT OF A PRODUCT WHICH HAD INHERENT TOXIC CHARACTERISTICS, THAT PRODUCT CAN BE REGULATED TO REMOVE THE TOXIC COMPONENT WHERE THERE ARE SUBSTITUTES FOR THAT COMPONENT. IN ADDITION, EPA SHOULD HAVE THE AUTHORITY, AS CALLED FOR IN THE BILL, TO REGULATE THE MANAGEMENT AND DISPOSAL OF PRODUCTS THAT CONTAIN TOXIC MATERIALS TO PREVENT HEALTH AND ENVIRONMENTAL RISKS FROM THE DISPOSAL OF THAT PRODUCT.

THE LESSON OF THE LAST TWENTY YEARS OF EXPERIENCE WITH ENVIRONMENTAL AND HEALTH PROTECTION IS THAT PREVENTIVE MEASURES ARE THE MOST COST EFFECTIVE. WAITING UNTIL SOMETHING HAS BEEN RELEASED INTO THE ENVIRONMENT AND AFTER MANY, OFTEN MILLIONS UPON MILLIONS, OF POUNDS HAD BEEN PRODUCED IS SIMPLY FOOLHARDY. WE NEED TO APPLY OUR KNOWLEDGE AND OUR WISDOM TO PREVENT MATERIALS FROM BEING RELEASED TO THE ENVIRONMENT. THIS PROVISION IS POTENTIALLY THE MOST SIGNIFICANT PROVISION IN YOUR BILL AND WE STRONGLY SUPPORT IT.

L. WHILE I STRONGLY SUPPORT THE ADDITION OF SECTION 5009 TO THE SOLID WASTE DISPOSAL ACT, CALLED FOR IN SECTION 309 OF THE BILL, I BELIEVE THE PROVISION COULD BE MADE STRONGER BY LOWERING THE SIZE OF THE CONTRACT TO A MUCH LOWER THRESHOLD AMOUNT, SUCH

AS, $100,000; AND TO REQUIRE FEDERAL AGENCIES TO GIVE THE SAME PREFERENCE TO THE ITEMS THAT ARE LISTED IN FEDERAL SUPPLY CATALOGS.

M. I STRONGLY SUPPORT THE CONCEPT OF IDENTIFYING HAZARDOUS CONSTITUENTS OF PRODUCTS, AS CALLED FOR IN SECTION 310 OF THE BILL, IN ORDER TO PROMULGATE REGULATIONS FOR THE DISPOSAL OR THERMAL DESTRUCTION OF THOSE PRODUCTS AS MAY BE NECESSARY TO PROTECT HUMAN HEALTH AND THE ENVIRONMENT. HOWEVER, AS NOTED ABOVE AND AS ALLUDED TO IN THE BILL, IT IS FAR BETTER TO SEVERELY CURTAIL OR PROHIBIT THE USE OF HAZARDOUS CONSTITUENTS IN THE MANUFACTURING PROCESS SO THAT DISPOSAL OF THE PRODUCT AT THE END OF ITS LIFE IS NOT SUCH A PROBLEM. SUCH A COURSE OF ACTION IS FAR MORE PREFERABLE TO ADDRESSING HOW TO DISPOSE OF AN ITEM HAVING HAZARDOUS CONSTITUENTS SINCE IT PREVENTS THE PRODUCT FROM BEING MADE IN THE FIRST PLACE WITH THOSE HAZARDOUS CONSTITUENTS.

I ALSO FAVOR THE PROHIBITION AGAINST LAND DISPOSAL AND INCINERATION OF LEAD-ACID BATTERIES AND MERCURY BATTERIES. HOWEVER, PROHIBITION IS NOT ENOUGH: WHAT ALSO IS NEEDED IS AN ALTERNATIVE MEANS OF MANAGING WASTE BATTERIES. I BELIEVE THAT THE BILL SHOULD REQUIRE BATTERY MANUFACTURERS TO RECOVER THESE BATTERIES AND TO SALVAGE WHATEVER IS USEFUL FROM THEM. THE MOST LIKELY METHOD OF RETURN WOULD BE IN THE FORM OF A COMPULSORY TRADE-IN OR DEPOSIT SYSTEM IMPLEMENTED ON A NATIONAL LEVEL.

MR. CHAIRMAN, I HAVE MET WITH SENIOR MANAGEMENT OFFICIALS OF THE BATTERY MANUFACTURERS OF THE UNITED STATES ON ISSUES REGARDING BATTERIES AS SOLID WASTE. I INDICATED TO THEM THE NEED FOR THEM TO APPLY THEIR CREATIVITY AND TALENTS TO PREVENTING BATTERIES FROM

ENTERING THE WASTE STREAM. IN NEW YORK ALONE, FOR INSTANCE, COMMON HOUSEHOLD CONSUMER BATTERIES INTRODUCE ANNUALLY INTO OUR ENVIRONMENT MORE THAN 115 TONS OF CADMIUM AND 40 TONS OF MERCURY.

I STRONGLY SUPPORT THE PROHIBITION ON LANDFILLING UNSHREDDED TIRES.

N. REGARDING SECTION 311 OF THE BILL, I BELIEVE THAT THE LIST OF SPECIFIED EPA GUIDELINES ADDED UNDER SUBSECTION 311(B) SHOULD AUTHORIZE USEPA'S ADMINISTRATOR TO REISSUE ITS PAPER, AS WELL AS ITS LUBRICATING OIL PROCUREMENT GUIDELINES IN ORDER TO ENSURE THAT A 10 PERCENT COST PREMIUM IS AUTHORIZED IN LUBRICATING OIL PROCUREMENT. THIS IS IMPORTANT SINCE, BY VIRTUE OF USEPA'S RELEASE OF ITS FINAL RULES ON GUIDELINES FOR FEDERAL PROCUREMENT OF LUBRICATING OILS CONTAINING RE-REFINED OILS,[10] GOVERNMENT AGENCIES ARE MANDATED TO TRY TO PROCURE LUBRICATION OILS WITH A MINIMUM 25 PERCENT RE-REFINED CONTENT, UNLESS THE RELUBE OIL IS AVAILABLE AT MORE THAN 10 PERCENT OF THE GENERAL MARKET PRICE OF VIRGIN OIL.

O. LASTLY, I TOTALLY AGREE WITH THE THRUST OF SECTION 402 OF THE BILL. HOWEVER, WE MUST GUARD AGAINST WHAT IS CALLED BY FORBES "THE LAW OF UNINTENDED CONSEQUENCES". A FEE OF $7 PER TON ON VIRGIN MATERIALS USED FOR PACKAGING WILL ENCOURAGE THE USE OF PLASTIC MATERIALS THAT ARE LIGHTER THAN PAPER AND WOOD PACKAGING BUT MORE DIFFICULT TO RECYCLE. AS A SUGGESTION, THE FEE COULD BE PLACED UPON THE VIRGIN MATERIALS BASED ON BOTH THE WEIGHT AND THE VALUE OF THE VIRGIN MATERIAL.

WITH RESPECT TO SUBSECTION 403(c)(1), I RECOMMEND THAT THE LANGUAGE BE CLARIFIED TO EXPRESSLY STATE THAT THE EXEMPTION IS

BASED UPON THE PERCENTAGE OF THE PACKAGING'S RECYCLED CONTENT (INCLUDING AS RECYCLED CONTENT, IN-HOUSE SCRAP).

I ALSO AM CONCERNED THAT THE DISPOSABLE DINNERWARE/FOOD SERVICE INDUSTRY IS NOT CLEARLY INCLUDED IN THIS SECTION. IT IS A FORM OF PACKAGING. IN FACT, THE EXPANDED PLASTIC FOAM CUPS ARE OFTEN USED TO PACKAGE EVERYTHING FROM TAKE-OUT FOODS TO NIGHT CRAWLERS.

CLOSING

AS CAN BE SEEN FROM THE ABOVE COMMENTS, I SEE THE PROPOSED WASTE MINIMIZATION AND CONTROL ACT OF 1988 AS A POSITIVE STEP IN THE RIGHT DIRECTION TOWARD ACHIEVING COMPREHENSIVE SOLID WASTE MANAGEMENT FOR THE NATION. HOWEVER, SOME REVISIONS ARE NEEDED TO FURTHER THE LAUDABLE OBJECTIVES OF THE BILL, AND I MAKE THE SERVICES OF MY STAFF AVAILABLE TO YOUR STAFF IN WORKING ON THESE MATTERS.

FOR YOUR CONVENIENCE, I HAVE PROVIDED YOU WITH COPIES OF THE STATE'S PRELIMINARY PLAN FOR TREATMENT AND DISPOSAL OF INFECTIOUS WASTE, PART 364 OF MY DEPARTMENT'S WASTE TRANSPORTER REGULATIONS (WHICH INCLUDE REGULATION OF INFECTIOUS WASTE TRANSPORTATION); NEW YORK'S SOLID WASTE MANAGEMENT PLAN; AND PROPOSED PARTS 219 AND 360 OF MY DEPARTMENT'S REGULATIONS; AND A MARKUP OF THE BILL ITSELF. YOU COULD SHARE THESE MATERIALS WITH YOUR STAFF PRIOR TO ANY DISCUSSIONS THEY MAY HAVE WITH MY STAFF ON THIS LEGISLATION.

I THANK YOU FOR YOUR ATTENTIVENESS AND NOW AWAIT YOUR QUESTIONS, IF ANY.

FOOTNOTES

1. *See*, ECL 27-0403, 27-0405, 27-0715, and 27-0717. *See also*, Public Authorities Law §1285-i, and Economic Development Law §181-b.

2. ECL 27-0717. With respect to Section 307 of the Bill, my Department in cooperation with the New York State Consumer Protection Board and the New York State Department of Economic Development, is finalizing for Governor Cuomo recommendations relating to the labeling requirements for consumer products sold in New York to assist recycling efforts by requiring information on material composition, recycling capability, and preferred waste disposal.

3. For example, *see* State Finance Law §§160-b, 163, 164, and 177; Public Authorities Law §§2875-a, 2875-b, 2878-a; General Municipal Law §80-a; County Law §626; General Municipal Law §104-a; Town Law §122-a; and Village Law §5-525.

4. 6 NYCRR 360-3.3(e).

5. Tax Law, §1201(f).

6. *cf*. 42 U.S.C. 6903(5) and (2[illegible]

7. 42 U.S.C. 6903(18), (19), (20), (22).

8. 42 U.S.C. 6929.

9. See Section 203(e) of the bill.

10. 53 F.Reg. 24999.

NSWMA

National Solid Wastes Management Association

Statement of

Eugene J. Wingerter

Executive Director / Chief Executive Officer

National Solid Wastes Management Association

Before The

Senate Committee on Environment and Public Works

Subcommittee on Hazardous Wastes and Toxic Substances

Washington, D.C.

September 22, 1988

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Congress Should Articulate a National Policy on Solid Waste Management

by Eugene J. Wingerter
Executive Director/CEO

Summary

Mr. Chairman, my name is Eugene J. Wingerter. I am executive director and chief executive officer of the National Solid Wastes Management Association. NSWMA is a trade group representing 2,200 private waste service companies in the U.S. and Canada. Our members include refuse haulers, landfill and resource recovery operators, recyclers, hazardous and biomedical waste treatment and disposal firms, equipment manufacturers and others. To give you a sense of perspective, such companies now collect over 80 percent of the country's residential and commercial refuse, and operate around half of its solid waste disposal capacity.

It gives me great pleasure to testify here today, because we support virtually every provision of your excellent bill. As you know, until now federal and state efforts to address the country's growing solid waste management problem have been spotty and haphazard. This performance has not gone unnoticed. Our opinion polling shows that Americans are becoming increasingly uneasy about waste disposal issues and about the apparent lack of leadership from public officials.

Your bill provides that leadership. In particular, its proposed amendments to the Resource Conservation and Recovery Act would go a long way toward remedying what we believe to be the major defect of existing procedures: the absence of a well-defined national policy on solid waste management and a clear federal role in setting environmental standards which provide a "floor" for state regulatory efforts. We applaud your initiative and will do everything we can to support it.

Let me outline four important issues which we believe your proposed bill addresses:

o Better planning. In our view, the most critical obstacle which faces policymakers in many parts of the country today concerns waste management capacity. New landfills, resource recovery plants and even recycling centers are not being built fast enough to meet local or regional demand. Although the reasons for this problem are varied, one constant theme emerges: fear that such facilities will endanger public health and the environment.

In the past, Congress has tried to address such problems by requiring state officials to prepare solid waste management plans. As part of the planning process, it was assumed that these officials would also look for viable solutions. Unfortunately, as we know, this has not been the case. Your bill takes a giant step forward by making state authorities responsible for assuring adequate management capacity, not just for producing a document to be placed in the files.

o Federal oversight and enforcement. To ensure that state officials carry out national policy, it is essential to provide the Environmental Protection Agency with firm oversight and enforcement authority. Such authority is incorporated into your bill. We are particularly encouraged by the provisions which allow EPA to step in where states have been remiss in devising adequate solid waste regulatory programs and to assume responsibility for permitting new facilities until this deficiency is overcome. Equally important, federal grant money would be denied to states which do not make sufficient progress with their waste management efforts. Without such provisions, Congress cannot be assured that state compliance with RCRA will improve.

o Expanded recycling. One of the essential elements of effective solid waste management involves recycling. According to our opinion research, 70 percent of American adults believe that recycling programs should play a major role in future management efforts. As members of the commercial recycling industry, we have accumulated a large body of experience which we believe will be useful to federal, state and local officials as such efforts take shape.

We also recognize that recycling programs face significant obstacles which your bill addresses. Perhaps the most serious of these obstacles involves the problem of developing new markets for recoverable materials. By directing federal agencies and their contractors to purchase recycled products (even though slightly less expensive alternatives are available), Congress sends a clear message to manufacturers, distributors and others who must make investment decisions or expand existing product lines. At the same time, we are encouraged by your effort to eliminate potentially harmful or dangerous substances from current manufacturing processes. Such measures are necessary to reduce the country's overall waste stream and to allow safer disposal of whatever cannot be reused or reclaimed.

o Orphan wastes. Perhaps one of the thorniest issues which Congress must resolve involves so-called "orphan wastes" (mining refuse, oil and gas drilling byproducts, etc.). Once again, we commend your solution to this dilemma. In our view, RCRA must establish firm priorities for EPA to identify which waste streams will be regulated under Subtitle C, which ones will fall under Subtitle D, and how these waste streams should be managed. Although we have one suggestion to make about this section of your bill--we believe that it should refer exclusively to "regulations" (which are obligatory) instead of to "guidelines" (which sound less stringent)--we feel that the proposed measures will achieve a major public policy goal: bringing unconventional wastes up to the same management standards as other byproducts and thereby assuring adequate protection of public health and the environment.

In the following sections, we provide further discussion of these opinions. We have also prepared a brief outline of our views on Subtitle C, concerning hazardous waste regulation, which might be helpful to you. We are happy to offer whatever additional information might be useful to this Committee.

Background

In 1976, Congress passed the Resource Conservation and Recovery Act and took its first steps in creating a national mandate to address the country's growing waste treatment and disposal problem. Although RCRA initially focused on hazardous waste, it also included important provisions concerning municipal solid waste, industrial refuse and other vital issues. In general, the law embodies three major policy objectives:

- Source reduction, to reduce the amount of waste--especially of unrecyclable waste--that is generated by industrial, commercial and domestic activities.

- Stricter standards for hazardous waste, to ensure far greater vigilance in the generation, treatment and disposal of chemical byproducts (Subtitle C).
- Better solid waste management, to improve handling practices by encouraging state governments to plan for expanded recycling programs, disposal capacity and other measures (Subtitle D).

Members of the National Solid Wastes Management Association support these objectives. At the same time, we believe that Congress now enjoys a significant opportunity to address the most important challenge which policymakers at EPA and other levels of government now face: the acute shortage of waste management capacity in many regions throughout the country.

Facing the challenge

In enacting RCRA, Congress affirmed its intention to safeguard public health and the environment from the unwanted byproducts of everyday life. Unfortunately, EPA has not always taken corresponding regulatory action or set appropriate standards. This is particularly true for solid waste management. Despite public concern, for example, the Agency has failed to issue firm rules about landfill location and design. Nor has it satisfactorily addressed the question of orphan wastes, which remain largely uncontrolled and may pose a significant threat to underground water resources. And when such wastes are regulated, a question of fairness frequently arises: refuse which is treated on-site by industrial generators often receives little oversight, while commercial treatment and disposal facilities are likely to face far greater scrutiny.

Instead of focusing on detailed remedies, Congress should develop a forceful national policy which will meet the country's solid waste management requirements until the 21st century. It should clarify and strengthen EPA's mandate, and encourage state officials to create clear, enforceable programs that reflect national goals. At the heart of these efforts, we believe that policymakers should stress the need for an "integrated waste management system" based on four elements:

- Source reduction. Greater emphasis should be placed on reducing the volume of rubbish before it is produced. In addition, troublesome compounds such as lead and cadmium--which ultimately pose a threat to groundwater when they are discarded as part of ordinary trash--should be minimized in common manufacturing processes and less toxic substitutes should be found.

- Recycling. With significant rates of public participation, many communities are able to recover as much as 20 or 25 percent of their residential and commercial waste. Such waste includes glass bottles, cardboard and paper, aluminum cans and other materials. Successful programs also require stable and viable markets for these commodities so that they may be returned to commerce.

- Resource recovery. Unreclaimed waste may be sent to a waste-to-energy plant, which reduces its volume by 90 percent. Such plants use state-of-the-art pollution control equipment to assure environmental protection and recover the heating value of garbage as steam or electricity.

- Landfills. Ultimately, the ash residue from waste-to-energy plants, along with bulky or unmarketable items like discarded furniture, must be sent to sanitary landfills. These facilities should be designed and built to safeguard underground water supplies, and provide the final repository for materials that cannot be salvaged or reused. In many areas, they also represent the most cost-effective way to dispose of raw garbage while protecting public health and the environment.

Such measures would go a long way toward resolving our country's impending solid waste disposal crisis. Other policies would address specific problems that have arisen concerning biomedical and orphan wastes, air emissions from waste-to-energy plants, ash management procedures, the critical need for state-level solid waste planning, and similar topics. Once these policies have been designed and appropriate standards have been set, Congress should firmly insist that state or federal permits must be issued for facilities that meet the rules. What follows are some specific proposals which Congress might consider.

Solid waste

One of the greatest challenges facing policymakers in the U.S. today involves proper disposal of municipal solid waste--refuse from residential, commercial and industrial sources. According to EPA, Americans produce nearly 250 million tons of this trash each year. Close to 160 million tons of that amount are generated by individual households and neighborhood businesses. Even after recycling and waste-to-energy combustion have taken place, over 131 million tons must be buried in landfills.

Yet landfills represent only a small fraction of the country's disposal facilities. Although specialists disagree, EPA recently reported that 226,732 sites hold some form of refuse that is not now defined as "hazardous." By far the overwhelming majority (94 percent) include loosely regulated surface impoundments, industrial waste piles or "land application units," used to contain industrial sludges, mining refuse, oil and gas residues and other "orphan wastes." Only 6 percent (12,962 sites) involve landfills and only half of these (6,584) receive residential and commercial rubbish. The rest are mainly confined to industrial, construction, demolition and "undefined" debris.

Does a solid waste "capacity crisis" exist? Certainly, there is enough open land throughout the country where well-designed, safe landfills might be built. But within many heavily populated regions, especially the Northeast and Great Lakes region, this is not the case. Consider these facts:

o In Connecticut, officials at the Department of Environmental Protection have calculated that most of the state's landfills can operate for only two more years. Already, 50 percent of all solid wastes are deposited in only nine major facilities; 88 of the state's 169 cities and towns must ship their rubbish to other jurisdictions for disposal.

- Since 1976, the number of landfills in New Jersey has dropped from more than 300 to fewer than 100; 12 of these sites now provide over 90 percent of the state's remaining capacity. Faced with an acute shortage of disposal space, 11 counties must send their garbage to out-of-state facilities. Over half of the state's refuse is presently "exported" to other regions.
- By 1995, according to the New York State Legislative Commission on Solid Waste Management, all landfills within the state will reach their capacity and close. Already since 1982, the number of facilities has declined from 500 to fewer than 270. Meanwhile, only one interim site has opened.
- In Pennsylvania, landfill capacity will be exhausted within five years. At the same time, 35 new permit applications remain under consideration--some for as long as seven or eight years. During this period, only one application has been approved.

Like many complex issues, the capacity crisis has diverse roots. Instead of permitting new facilities, or developing realistic solid waste management plans (as Congress directed in 1976), state and local officials have often aggravated the problem by pursuing a different course: balkanization. Waste importation bans, "flow control" restrictions, rate regulation of landfill fees and similar measures are now under consideration in a dozen state legislatures or have recently been adopted.

What all of these measures have in common is an effort to "hoard" local capacity at the expense of neighboring communities, regions or states--without running the political risk of siting new facilities. And by neglecting to set minimum design and location requirements for sanitary landfills, EPA itself has greatly contributed to public uneasiness about solid waste disposal.

In addition to building more landfills, another problem must also be addressed: orphan wastes. As EPA's statistics reveal, the overwhelming majority of land disposal sites around the country are intended to hold such wastes--not in landfills, but rather in surface impoundments and other facilities. Although many of these sites may meet current standards for groundwater protection, others may not. In our view, EPA has been remiss in failing to determine which wastes should be regulated and which are truly harmless or innocuous.

To solve these problems, we urge Congress to take two specific steps:

- Planning. RCRA should clearly articulate a national goal of safe, cost-effective solid waste management. To reach that goal, state officials must be held responsible for actually achieving adequate waste disposal--not just for taking short-term measures to get through next week's crisis. Part of this responsibility entails developing workable solid waste management plans that create a framework for local and regional efforts. Such plans should consider a range of waste management tools: source reduction, recycling, combustion and landfilling. At the same time, Congress should reaffirm that state authorities cannot rely on measures which restrict the movement of waste within or between jurisdictions or otherwise impede the market for environmentally sound disposal capacity.

To make these measures work, Congress should require EPA to reevaluate its criteria for state solid waste planning and assure that such criteria reflect national priorities. Similarly, the Agency should review all state management plans to determine whether state officials are meeting national goals. Failure to develop appropriate procedures--including permitting procedures that encourage new disposal capacity--should carry specific sanctions. And finally, Congress should encourage state officials to issue appropriate permits for new disposal facilities under existing management plans and to avoid engaging in *de facto* regulatory moratoriums.

- Regulating orphan waste streams. Unregulated waste streams, including oil and gas drilling residues, mining wastes, cement kiln dusts, and various other byproducts such as ash from resource recovery plants, may pose a threat to public health or the environment. Congress should direct EPA to determine which of these materials should be managed under Subtitle C (as hazardous wastes) and which fall under Subtitle D. The Agency should then be required to determine appropriate treatment and disposal procedures for each specialized waste stream.

In making these determinations, EPA should consider each material's physical and chemical characteristics, as it now does for so-called "listed" hazardous wastes. It should also take into account the range of management practices (installation of special liners and leachate collection systems, groundwater monitoring equipment, etc.) that are available to ensure adequate control. By isolating resource recovery ash from other garbage, for example, such control may often be provided in existing solid waste landfills. Conversely, materials that now escape regulation altogether may

> well fall under the strict requirements of Subtitle C.
>
> Whatever course EPA elects, it should reflect a clear statutory commitment to look for the best management solution--not simply apply cookie-cutter remedies that yield few real dividends. To assure this goal, Congress should establish priorities for EPA's action and set firm deadlines for completing appropriate studies or issuing related standards. And it should direct state authorities to include such standards in their regulatory programs.

Once these steps have been taken, we believe that Congress will have laid a firm foundation for resolving the country's solid waste problem and overcoming a serious impasse. Apparently, public support for such actions has already grown: recent opinion polls have shown that 53 percent of the adult population believes that solid waste disposal capacity represents a "serious problem" in the country today; a large number also said that federal or state officials should assume responsibility for siting disposal facilities when local opposition prevents new facilities from being built. Evidently, then, Americans expect political leadership on this vital issue, not hand-wringing or evasiveness.

Resource recovery

Resource recovery involves burning solid waste in special combustion chambers to generate steam or electricity. Along with recycling and landfills, resource recovery (also called "waste-to-energy") forms an essential part of our country's strategy to deal with the growing volume of waste that Americans now create. Its main purpose is to reduce the volume of garbage by 90 percent, leaving a much smaller quantity of ash residue that must be placed in landfills.

Currently, around 110 waste-to-energy plants operate in the U.S. and another 90 are in the advanced planning stage or under construction. These plants burn approximately 6 percent of the country's garbage. In contrast, West Germany and Japan depend much more heavily on resource recovery to conserve landfill space and support recycling programs.

One of the main reasons that state and local officials have been reluctant to use this valuable waste management technology more widely involves regulatory uncertainty about air emissions and ash disposal. Under RCRA, for example, EPA has already created standards for heavy metals in landfill leachates and has conducted research to ascertain what levels actually occur in leachates from resource recovery ash. But public doubts about ash disposal persist.

To overcome such problems, Congress should direct EPA to determine the best treatment and disposal procedures for combustion ash and set appropriate standards. Ultimately, regulations for ash disposal--and for all other orphan wastes--should be guided by a statuatory commitment to safeguarding public health and the environment based on good science and good engineering.

Recycling

One of the most promising developments in solid waste management includes increased efforts to recover and reuse discarded materials. Currently, around 10 percent of the country's rubbish is recycled; with additional encouragement, this figure might reach 20 percent or even higher--over 30 million tons per year. In fact, recycling has already become a major part of solid waste planning in regions where disposal capacity is severely limited: Connecticut, New Jersey, Rhode Island and other states now require local jurisdictions to offer or provide such programs.

Perhaps the greatest obstacle faced by recyclers involves adequate markets. Merely separating discarded materials into different piles does not assure that they will be sold or that local programs become self-sustaining. The key to successful recycling involves returning recoverable materials to commerce. Such materials must be available in sufficient volume to pay the costs of beefed-up collection schedules, multiple routes and even additional trucks or other equipment. Often, the financial health of recycling efforts depends on supplementing the sale of commodities like glass and cardboard with savings from the avoided costs of rubbish disposal.

Although addressing these challenges remains primarily a local issue, Congress can provide valuable leadership in several ways. It can articulate a national policy which emphasizes source reduction, recovery and reuse before combustion and disposal measures are applied. Similarly, it can give formal sanction to the view that manufacturers should remove potentially dangerous materials from the waste stream by substituting less toxic equivalents.

To assist in expanding the market for recyclables, Congress should set new procurement guidelines which direct federal agencies to buy recycled paper and other products (i.e., products which contain specified levels of "recycled content") even if these products cost more than virgin commodities. A cost allowance of 10 percent would provide significant encouragement to recyclers and to manufacturers who might buy recovered materials. EPA would also set a reasonable target for state programs, which should be urged to adopt the federal standard. Finally, purchasing guidelines should be extended to government contractors.

Three additional measures are required. Congress should instruct EPA to create a national clearinghouse for recycling information. This clearinghouse would provide municipal officials, private citizens and potential recyclers with accurate data on state-of-the-art technologies, new programs and local activities. EPA should also undertake a national education program designed to increase public awareness about the need for expanded recycling efforts. And to finance such activities, Congress should impose a fee on virgin materials used to produce packaging.

Finally, EPA should undertake a major study of the disincentives which face local programs. Many of these disincentives arise from state and federal requirements, especially tax laws and transportation policies which favor virgin materials over recycled products. Already, several states have begun to address this problem, but their jurisdiction and perspective remain limited. Congress should direct the Agency to examine such issues and to prepare a list of specific recommendations for future legislative action.

Biomedical waste

In recent months, public attention has focused on one particular aspect of the waste management problem: improper biomedical waste disposal. The largest generators of this refuse are primary health care facilities, which discard an estimated 16 pounds of trash per occupied bed each day. Until recently, about 10 percent of this trash was managed as infectious wastes. But health care facilities have begun applying what is known as "universal precautions" and have developed special safeguards for all products that come into contact with blood or bodily fluids. As a result, the percentage of hospital refuse that needs to be managed as infectious waste has increased to the range of 30 or 40 percent.

Although increased volume alone is not a cause for alarm, refuse workers and the public at large may be exposed to disease when biomedical waste is not properly handled or labeled. Consider these examples. Hospital waste can be treated by incineration or autoclaving (in which steam is used to sterilize infected materials). But this treatment may also be ineffective when incinerators fail to maintain sufficient temperatures or to destroy plastics and other products mixed into the load. Similarly, autoclaving may be incomplete when wastes are not exposed to high temperatures for an adequate period of time.

Another serious problem arises when infectious waste is mixed with regular rubbish. Unfortunately, such procedures seem to have become almost routine. Consider a recent report from the New York City Environmental Control Board, which found that more than half of the city's hospitals regularly mix contaminated refuse with ordinary trash. Nor do current shipping and labeling requirements--which vary from state to state or simply do not exist at all--provide much help. Waste haulers and disposal operators often have no way of knowing where the refuse has originated, whether it has received any form of treatment or what it contains.

Clearly, RCRA should be amended to address these problems. Instead of allowing state agencies to devise partial or incomplete solutions, Congress should lay the groundwork for a unified national effort and should direct EPA to set standards that would give consistency to state-level initiatives. Specifically, we recommend removing the reference to infectious waste from Subtitle C, which defines hazardous waste, and enacting additional measures that include:

- An explicit and comprehensive definition of the term "infectious/biomedical waste." A common definition of materials that should be managed as "infectious" is essential for any uniform national program. Allowing hospital infectious control officers to judge what is dangerous and what is not will lead to inconsistencies, misunderstandings, and at best a spotty implementation of the national management system.

- A prohibition against exempting any generators from regulation, even small-quantity generators. Medical wastes can transmit diseases even in very small volumes.

- A prohibition against any disposal of infectious waste without prior treatment. Increasingly, refuse workers are refusing to handle infectious wastes that have not been properly treated. Such wastes should not be sent for landfill disposal.

- A mandate for EPA to develop a national regulatory program with specific minimum requirements. The basic objective of this program should be to create a "floor" for state efforts that would lead to uniform approaches throughout the country.

One important element of EPA's effort must involve setting minimum requirements for shipping documentation. Confidence in procedures for managing infectious waste ultimately depends on this "paper trail." Detailed information should be provided by waste generators, transporters, and treatment and disposal operators. EPA should develop a standardized national system to achieve this goal.

Naturally, we recognize that creating a new federal program will not completely solve the nation's infectious waste problem. Even if uniform standards are adopted, there will still be questions of enforcement and other unresolved difficulties. Nonetheless, a program that provides effective leadership will represent a major step forward.

Hazardous waste

Since 1976, Congress has reaffirmed its commitment to strong regulation of hazardous waste. EPA has responded by setting targets and goals, drafting standards, implementing public policies on waste reduction and other vital issues, and eliminating loopholes. Under RCRA, the Agency may delegate its authority to state programs that create rules which are "at least as stringent" as federal regulations. Currently, 41 states manage such programs with oversight from EPA.

Clearly, expanded treatment and disposal capacity has become a major priority for state and federal officials, waste generators and commercial operators. Alternative technologies such as incineration will undoubtedly make an important contribution to the country's waste management system. But as EPA has recently acknowledged, "Although [amendments to RCRA] favor treatment over land disposal of waste, landfills will be needed long into the future. Land disposal units will continue to be the ultimate destination for the residuals of various other treatment processes..."

One difficulty that has aggravated the capacity issue arises from a growing disparity between federal and state regulations. We recognize that this is a difficult area for any legislative body, and one which may not be amendable to Congressional action. Nonetheless, many of the same "hoarding" problems that have emerged with solid waste disposal capacity are appearing with hazardous waste: interstate importation bans, local permit requirements restricting the quantities of out-of-state waste that may be treated, etc.

What all of these restrictions have in common is that they are unlikely under any reasonable scientific standard to enhance protection of public health and the environment. Unless this trend can be reversed, EPA may soon be unable to set such standards or to fulfill its responsibility for maintaining a well-run, effective regulatory program.

Conclusions

As Congress looks ahead toward the year 2000, it is faced with critical choices in setting the country's solid waste management priorities. Clearly, the most important choice involves treatment and disposal capacity. By directing EPA to remove uncertainties in the regulatory process, for example, Congress might overcome significant roadblocks that have led many communities to a complete impasse. And by resolving the question of orphan wastes, it will bring potentially dangerous refuse streams under professional handling and control.

Beyond such measures, Congress should reaffirm its commitment to a national policy of integrated waste management. By combining source reduction, recycling, waste treatment and disposal, local communities may arrive at a cost-effective solution to their refuse problem--without recourse to importation bans, siting restrictions or other measures to hoard existing capacity. Such communities are clearly looking to state and federal officials for leadership on this difficult issue. We applaud this Committee and its chairman for their efforts to provide that leadership, and remain eager to assist in whatever way we can.

9/20/88

Help Wanted:

Congressional Action To Avert Waste Disposal Capacity Crisis

National Solid Wastes
Management Association
1730 Rhode Island Ave., NW
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Help Wanted:

Congressional Action To Avert

CRITICAL CONGRESSIONAL CHOICES

One of the most important choices facing Congress as we look toward the year 2000 centers on setting a national strategy for waste management. This strategy must assure that there will be adequate management capability and disposal capacity for all wastes, including solid, biomedical, and "orphan wastes." Significant improvements in the regulatory process are needed at the federal level to set a clear direction for state and local authorities to follow. Congress must develop a strategy that will encourage state officials to take action to manage their local waste streams.

This strategy will be articulated by Congress in revisions to the Resource Conservation and Recovery Act (RCRA). Our current waste management capacity shortage requires that we implement solutions to avert a capacity crisis.

NSWMA believes that Congress should adopt a national policy based on integrated approaches to waste management. By combining source reduction, recycling, resource recovery, and landfilling, local communities can arrive at an environmentally sound and cost-effective solution to their refuse problem—without recourse to importation bans, siting restrictions, or other measures to hoard existing capacity. Communities are clearly looking to state and federal officials for leadership on this difficult issue. We applaud Congress on its efforts to provide that leadership, and remain eager to assist in whatever way we can.

INTEGRATED SOLID WASTE MANAGEMENT STRATEGY

Congress must develop a forceful national policy to meet the country's solid waste management requirements into the 21st century. EPA's mandate must be clarified and strengthened and state officials must be encouraged to create clear, enforceable programs that reflect national goals. At the heart of these efforts, NSWMA believes that policymakers should stress the need for an "integrated waste management system" that includes four basic elements:

☐ **Source reduction.** We must reduce the volume of material entering the waste stream and replace the problem substances commonly used in our manufacturing processes with less toxic substitutes.

☐ **Recycling.** We must reuse valuable commodities, rather than discard them. By increasing public participation, many communities are recycling up to 20 or 25 percent of their residential and commercial wastes, including glass bottles, cardboard and paper, aluminum cans, and other materials.

☐ **Resource recovery**. We can reduce the volume of unreclaimed wastes by as much as 90 percent by utilizing today's waste-to-energy technology. By using state-of-the-art pollution control equipment to assure environmental protection, such plants recover the heating value of garbage as steam or electricity.

☐ **Landfills**. In addition to other efforts, we must recognize that landfilling wastes represents an essential component of any community plan. Equipped with pollution control liners and leachate collection systems, landfills assure environmental protection and can recover energy through the production of methane gas.

Waste Disposal Capacity Crisis

BIOMEDICAL WASTES — AN EMERGING WASTE MANAGEMENT PROBLEM

Reauthorization of RCRA must address the problems posed by the increased volume of biomedical wastes being generated today. Instead of allowing state agencies to devise partial or incomplete solutions, Congress must lay the groundwork for a unified national effort and direct EPA to set consistent standards for state-level initiatives. Specifically, Congress should remove the reference to biomedical wastes from Subtitle C, which defines it as a hazardous waste, and create a new subtitle that includes:

☐ **An explicit and comprehensive definition of the term *"infectious/biomedical wastes."*** This is essential for any uniform national program.

☐ **A prohibition against exempting any generators from regulation, even small-quantity generators.** Medical wastes can transmit diseases even in very small volumes.

☐ **A prohibition against any disposal of infectious wastes without prior treatment.** Refuse workers increasingly are refusing to handle infectious wastes that have not been properly treated.

☐ **A mandate for EPA to develop a national regulatory program with specific minimum requirements.** The program would create a "floor" for state efforts leading to uniform approaches throughout the country.

☐ **Require EPA to establish a manifest system for shipping documentation of all biomedical wastes.** Detailed information should be provided by waste generators, transporters, and treatment and disposal operators.

Statement By

Waste Management, Incorporated

Before The

Senate Environment and Public Works Committee
Subcommittee on Hazardous Waste
and Toxic Substances

Concerning the

Waste Minimization and Control Act of 1988
(S. 2773)

September 22, 1988

James T. Banks
Director of Government Affairs

Good morning, Mr. Chairman, and thank you for this opportunity to discuss the Waste Minimization and Control Act of 1988. This Committee has a long and proud tradition of leadership in developing tough, innovative legislation to protect the environment. We believe your bill will claim its place in that tradition because of its comprehensive, aggressive approach to an area filled with difficult issues and significant environmental consequences. The federal presence in solid waste disposal stands today where the national air and water pollution programs stood nearly two decades ago - in the dark ages. We believe your initiative will bring about a much needed renaissance. We commend you and your staff for this beginning, and look forward to assisting in any way over the months ahead.

Waste Management brings a strong interest and a wealth of experience to this discussion. With over 30,000 employees and operations on five continents, we are the largest provider of waste management services in the world. In this country, Waste Management serves more than 6 million single family residences and nearly a half million businesses in 600 cities and towns spread throughout 38 states. We conduct more than 150 recycling operations, and are adding more nearly every day. The company owns or operates about 120 sanitary landfills. Our Chemical Waste Management subsidiary conducts a thriving waste reducton consulting service, and operates 20 permitted hazardous waste treatment, recycling and disposal facilities. We have just completed a $20 million laboratory to analyze samples from some 4,000 groundwater monitoring wells in the Company's system - - more wells than are operated by the U.S. Geological Survey. And our internal company standards for facility design and operation are considerably more stringent than anything required by federal and most state laws. In short, Waste Management has a compelling interest in this national effort to promote recycling, waste reduction, and carefully controlled disposal activities that can provide a firm foundation for the services we offer.

From that perspective, Mr. Chairman, I would like to address several of the major components of S.2773, and to explain why we believe a strong federal presence is so badly needed.

The starting point is this nation's inability to provide enough environmentally sound capacity to treat and dispose of its wastes. This problem is a regional one at the moment, but it is growing daily and without a doubt will assume national proportions in the next decade absent a federal initiative. I know the private sector stands ready to provide that service. This growing capacity shortage represents a failure of government at the state and local level that I believe the Congress must move aggressively to remedy. Your bill recognizes that fact, and takes three important steps in the right direction.

First, your proposal encourages waste volume reduction, recycling, and reduction in the toxic content of waste materials. It takes a realistic approach to recycling by providing the means to stimulate markets, not merely to demand the separation and collection of recyclable materials. These represent first principles in any workable national effort to match the supply of, and demand for, waste disposal services. As a nation, we not only should stop discarding reusable materials, we must stop accelerating the growth of waste volumes that strain the disposal system. And every reasonable measure must be employed to minimize the presence of known toxic constituents in wastes destined for disposal or incineration. These measures go beyond good policy; they are necessities.

Second, the bill would place on the states, for the first time, a federally enforced obligation to plan for, and site, the necessary treatment and disposal facilities to handle the waste volumes expected to remain after source reduction and recycling initiatives have had their impact. Many states and regional authorities have been unable to meet these responsibilities because of political risks, lack of federal funding and, most important, the lack of any meaningful sanction. The impacts have been felt by other states who unfortunately have begun to hoard their remaining capacity, and thereby stifle regional management screnerios, through importation barriers of one kind or another. Your bill goes to the heart of this complex problem by requiring state planning and siting programs, by authorizing federal financial assistance,and by imposing federal sanctions meaningful enough to spur action.

Third, the bill requires that EPA follow through on the federal commitment to effectively regulate waste disposal facilities in a manner that truly protects the environment, and thereby provides the foundation on which state and local officials can stand in their efforts to build the confidence demanded by the public in any siting or permitting process. In the 1984 amendments, Congress directed EPA to issue strong federal standards because it feared that many states had failed to move aggressively in this area. Data from EPA's draft report to Congress confirm this fear; for example:

o The most recent survey (June 1985) indicates that nearly 1800 open dumps remain in this country even though there has long been a ban on open dumping

- Very few states have adopted standards comparable in environmental protection to those issued by EPA in 1979 -- the federal standards that Congress found wanting in 1984 and told EPA to revise.

- Even though federal law has long required that states implement permit programs, almost half of the Subtitle D facilities remain unpermitted.

- Only about half the States have requirements for liners and leachate collection, and fewer than half have location standards for hydrogeological conditions.

- Groundwater monitoring is the bright spot, but even there 9 states have no requirements at all.

These were the reasons why Congress directed EPA to strengthen its federal standards, in final rules to be issued no later than March 1988, and to ensure that States enforce them. EPA has not done that. The irony is that, in its recently proposed (not final) rule, EPA has deferred once again to these same state programs. Our industry has lobbied

EPA for two years to provide minimum design, location, operation, and monitoring requirements. Except for groundwater monitoring, the proposed EPA rule still leaves most of the tough choices to the States. As in most of these areas, EPA has long had the authority to act. What your bill adds is a clear duty to meet this responsibility.

Mr. Chairman, the combination of these three ingredients--waste minimization programs, planning and siting requirements, and tough federal standards -- will move this nation toward coping with its waste disposal problems. We certainly applaud and support each of these initiatives.

Another component of your bill that requires special attention and support is its provisions to address what we term the "orphan wastes." Here again, EPA has the authority to take action, but has not. Nearly 230,000 Subtitle D disposal facilities operate in this country, managing 11 billion tons of solid and liquid wastes. Half of these are ponds filled with nearly 9 billion tons of oil and gas drilling muds and brines containing high concentrations of chloride, barium, sodium, and calcium. Only 0.1 percent of these are monitored for groundwater contamination, and less than one-third are lined. Over one billion tons of mining wastes are placed in some 25,000 ponds; about 6 percent are lined and less than a third have groundwater monitoring. These mining wastes contain heavy metals, sulfates, and cyanide. And 430 million tons of industrial wastes annually are placed into onsite waste ponds, piles, landfills and land application units -- three times the amount of municipal solid waste disposed of in all the sanitary landfills in the country. These are contributed by the organic chemicals industry and over 20 other industrial categories, and contain relatively high levels of heavy metals and organic constituents. Very few of these units have groundwater monitoring or liner systems.

EPA has focused its attention on the roughly 6,000 sites handling 136 million tons of municipal waste -- about 1 percent of the total -- and all but ignored the other quarter million despite obvious and recognized potential for environmental harm. Lack of hard data has been EPA's problem, but there is no excuse for failing to get that data promptly through permit applications, waste analysis, monitoring systems and other regulatory means within the Agency's authority.

Some, but not all, of these large-volume waste categories have been mired for eight years in a study program under existing law. These provisions directed EPA to determine whether such wastes should be regulated as hazardous and, if not, to address them under Subtitle D. The

Agency -- as well as some in the mining, oil and gas, and utility industries -- will tell you these provisions are working, that EPA has all the authority it needs. Massive studies have been conducted. Some hazardous waste determinations have been made. What has been missing is the final action of regulating these wastes.

That final action would be forced by this legislation. While preserving EPA's authority to utilize Subtitle C, the bill would require disposal permits and set schedules for issuing regulatory standards appropriate to these waste categories. It is an ambitious and tough proposal, but it also is long overdue and we support it fully.

One final area of the bill in which Waste Management takes a special interest is Section 206 on waste exports. We are very concerned about growing exports of waste from the United States for disposal abroad. Waste exports are being driven by cost-savings secured through evasion of U.S. environmental requirements. We believe that such activity warrents greater scrutiny by our government. We do not believe that U.S. waste problems should be passed off to other countries where disposal is cheap and dirty.

Although section 206 is a good start, it needs strenghthening. We believe that no waste should be exported from the United States unless the Administrator of EPA is informed about the management that waste will receive abroad and is satisfied that such management will meet environmental standards that are no less strict than those required by federal law in our own country.

Section 206 would prohibit exports unless the U.S. and the receiving country have concluded an international agreement containing "standards protective of human health and the environment..." No mechanism is provided, however, for EPA assurance that such standards will be followed when the agreement is implemented, nor is it clear that diplomatic negotiations pursuant to such a general standard will result in requirements as strict as those in the U.S.

These principles could be placed in section 206 by creating a permit requirement. The permit applicant should be made responsible for providing all information needed, and for paying the full cost of permit issuance and monitoring activity by EPA. Alternatively, registrants under section 206 could be required to file information demonstrating that any solid waste exported will be transported, treated, stored, and disposed of in accordance with environmental standards no less strict than those that would be required by federal law if the waste were managed within the United States. In addition, Section 206 should provide that no solid waste could be exported pursuant to such a registration unless the EPA Administrator were satisfied that this evironmental requirement was met.

* * *

Mr. Chairman, this is an excellent bill. It includes other important initiatives too numerous to discuss here -- provisions on medical wastes, incinerator ash and others. I think you will find widespread support and a keen interest in this bill. We appreciate the opportunity to take part in the beginning of this national dialogue, and to help in your search for workable solutions.

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STATEMENT OF HERSCHEL CUTLER
BEFORE
UNITED STATES SENATE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
SUBCOMMITTEE ON HAZARDOUS WASTES AND TOXIC SUBSTANCES

SEPTEMBER 22, 1988

Good morning. I am Herschel Cutler, Executive Director of the Institute of Scrap Recycling Industries. ISRI is the national trade association for the scrap recycling industry. ISRI's 1800 members process, broker and consume scrap metal, paper, glass and plastic for reuse in making new materials. Though often overlooked, our industry has decades of real-world experience in recycling materials that would otherwise have to be buried or burned. Today we would like to offer the subcommittee some general views on the overall scope and direction of S. 2773. With the Chairman's permission, we will submit a detailed analysis of the bill for the record in the near future.

In order to effectively promote genuine recycling, federal legislation must contain four key features:

--A recognition of the historic and fundamental differences between solid waste and recyclables, and between solid waste management and recycling.

--Demand-side incentives for increased use of recyclables.

--Assured access to disposal capacity for the wastes which recycling operations inevitably generate.

--Design standards for products that enhance, rather than impede, their safe recycling.

1. Because the differences between solid waste and recyclables are commonly ignored, a stigma often attaches to the handling of secondary materials. This unjustified stigma was evident in media misunderstanding of the Speaker of the U.S. House of Representatives when he recently observed that the major export from the port of New York is "junk" or "waste" -- more accurately, scrap metals and waste paper. The media were quick to assume that these remarks were negative. However, we agree with Speaker Wright that praise -- not condemnation -- is in order for our industry's success in finding markets for the valuable resources that scrap processing diverts from the solid waste stream. As the authors of the "Waste Minimization and Control Act of 1988" recognize, markets, whether domestic or foreign, are a precondition to recycling.

A serious consequence of the failure to differentiate between wastes and recyclable materials could be the regulation of recyclers as if they were solid waste management facilities, including permit requirements. The language of S.2773 appears to be ambiguous on the issue of what kinds of facilities would have to obtain state permits. The bill should clearly limit the proposed permit program to operations that collect and/or receive waste for the principal purpose of disposing of it by burying or burning. ISRI knows of no state in which scrap processing facilities are required to obtain permits like those applicable to landfills or incinerators. Indeed, three major states that have recently adopted solid waste recycling legislation or regulations -- Florida, Pennsylvania and New York -- rejected permitting requirements for recycling facilities. What justification is there for Congress to extend permitting requirements to recyclers?

ISRI believes, and experience confirms, that there is a bright line between recyclables and solid waste. Whether a secondary material should be considered a solid waste for regulatory purposes depends on how it is actually handled: was the material thrown away or abandoned, without reuse or reclamation, or was it instead specifically diverted or removed from other discarded materials for purposes of materials recovery? Where a particular material is bought and sold in commercial transactions on a regular basis, a strong inference arises that discard or abandonment was not intended and solid waste management controls would not be indicated.

This approach would not create a haven for "sham recycling". There are ways to distinguish sham recycling from the real thing: if consideration is not paid for materials at some point in the recycling chain, an intent to simply get rid of them can be inferred. If secondary materials are speculatively accumulated it also would be reasonable to infer that they are not destined for recycling. Similarly, if a company derives its revenues primarily from payments for taking materials, rather than from sales of processed recyclables, then it is not a bona fide recycler. For such materials and facilities, solid waste regulations and permits would be appropriate.

2. Demand-side incentives are crucial to achieving increased recycling. Demand-side incentives encourage manufacturers to purchase more recovered materials as ingredients for new products. Without "end-user" markets, materials diverted from solid waste will simply return to the solid waste stream whence they came.

We recognize that it has been difficult for state and local governments to resist the public plea to do something to alleviate the solid waste crisis, even if the "doing something" is legislating supply-side incentives. Supply-side measures mandate collection of source separated materials; supply-side measures provide government funds via grants or low-interest loans to add collection and/or processing capacity. But more collection and processing of recyclables does not necessarily create increased purchases of recyclables for reuse. We hope Congress resists this simplistic approach.

We are encouraged by the current bill's emphasis on "markets first," and we stress that the markets that matter are the end-user, or reuse markets. Expanding the nation's capacity to collect, process and market recovered materials at new or existing facilities will not drive increased recycling. End-users' willingness to purchase recyclable materials will determine the amount of recycling that actually occurs.

Congress' recycling goals can best be achieved if two features are stressed in legislation: one is the contribution of the existing scrap processing and recycling industry in moving diverted materials to market and its ability to do even more. The second is the need for manufacturers to expand their purchases of secondary materials as product inputs.

In 1987, the scrap processing and recycling industry handled over 55 million tons of scrap iron and steel, about six million tons of other metals--aluminum, copper, lead, zinc--and over 20 million tons of scrap paper through established processing and marketing channels. The constraint on the industry's throughput was not a lack of unprepared recyclables nor a lack of processing capacity: the industry is prepared to absorb far more material, provided end-users will purchase the material. State and local solid waste planners should incorporate existing scrap processing and marketing capacity into plans to expand current recycling levels. As a corollary, public funds should not be used to construct new and unneeded processing capacity.

At the same time, this legislation can create powerful incentives for manufacturers who supply the federal government with products to manufacture them with increasing amounts of secondary materials. Procurement guidelines for products made with recovered materials are one of the single, most potent tools available to stimulate increased levels of recycling.

3. To maintain existing levels of recycling, let alone increase the recycling of materials from municipal solid waste, it will be essential for states' long-term solid waste management plans to assure disposal options for recyclers' wastes. Recycling inevitably generates unrecyclable residues. A case in point is the automobile, which typically contains several hundred pounds of non-metallic materials which become waste when the vehicle is fragmentized for recycling. Ready access to cost-effective waste disposal is integral to economic recycling. Given the waste volume reduction which recycling achieves, it is appropriate to assure disposal capacity for recycling residues, if necessary, by creating a preference for such wastes as compared with non-recycled wastes.

4. ISRI understands policymakers' oft-stated concern that recycling be accomplished in an environmentally sound manner. This legislation can take a giant step in that direction by requiring manufacturers to consider the recyclability of their products during the product design process. By shifting away from the use of non-essential hazardous constituents that impede safe recycling of obsolete products, we will begin to address one of the most avoidable barriers to recycling.

Not only will manufacturers reduce risks to their employees and lower their own waste management costs by reducing toxic inputs, but we also will eliminate end-of-the-line costs that can determine whether a product is recyclable or not.

For this reason, we applaud your efforts in this bill to begin to craft a national "Design for Recycling" policy. Of course, such a policy will recognize that, if there is no feasible substitute for a hazardous constituent in a useful product, then its continued manufacture may be appropriate. In that case, however, as in the case of the vast numbers of existing products already introduced to commerce made with no thought for recyclability, recyclers should not be asked to bear all of the risks, costs and liabilities associated with recycling them safely.

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October 6, 1988

SUPPLEMENTAL STATEMENT OF HERSCHEL CUTLER, EXECUTIVE DIRECTOR INSTITUTE OF SCRAP RECYCLING INDUSTRIES, INC. ON WASTE MINIMIZATION AND CONTROL ACT OF 1988 (S. 2773)

The Institute of Scrap Recycling Industries, Inc. (ISRI) respectfully submits the following statement as a supplement to the oral and written testimony presented by ISRI to the Subcommittee on September 22, 1988.

ISRI, representing almost 1800 commercial processors, brokers and consumers (end-users) of scrap metal, paper, glass, and plastics, strongly supports government initiatives -- federal, state and local -- to intensify recycling of materials now being discarded as municipal solid waste. Congress should recognize, however, that massive amounts of secondary materials are already being recycled. For example, in 1987 scrap recyclers handled some 55 million tons of scrap iron and steel, several million tons of other scrap metals (including over 30 billion aluminum beverage containers), and over 20 million tons of scrap paper. If this material were not recycled, the nation's solid waste stream, estimated by EPA at 160 million tons yearly, would be half again as large.

It is imperative that new government-sponsored recycling programs build on, rather than undermine, the country's existing commercial recycling base. One objective of "recycling" legislation must be to maintain the economic viability of commercial recycling enterprises. A healthy scrap recycling industry will continue to recycle millions of tons of traditional scrap materials, while also providing processing and marketing for materials heretofore consigned to the solid waste stream.

By contrast, an industry inundated by a tide of newly-collected "recyclables" for which there are no viable markets, or which must compete with a plethora of publicly operated or subsidized recycling facilities, will have a hard time even maintaining present levels of recycling, let alone expanding them.

SPECIFIC COMMENTS

Section 101 (a): New section 1002 (b)(11) states as a Congressional finding that "the generation of waste containing hazardous substances must be reduced and recycled to protect human health and the environment and to minimize capacity problems." (emphasis added). This finding is somewhat misleading in that it suggests that either of two approaches to minimizing toxic solid waste are equally feasible: either reduce the amount of toxic solid waste generated or recycle such waste after it is generated. However, the presence of toxics in technically "nonhazardous" obsolete products creates substantial risks for recyclers, such that many such materials simply cannot be recycled safely and economically. Recycling of such materials should not be considered an alternative to toxics reduction. Only in those cases where the toxic constituents of a waste product cannot feasibly be eliminated, i.e, by substituting non-toxics in the product at the design and manufacturing stage, should recycling be considered a "first-best" waste management alternative for that product.

Section 102 (e): ISRI questions whether the waste management hierarchy established by the "National Policy" set forth in amended section 1003(b) is logical or necessary to an efficient approach to waste management. Though it is obvious that we strongly support recycling, we also recognize that in some instances or locations recycling may not be cost-effective as compared with other methods, e.g., landfilling, even under a system of fully allocated cost accounting. The national policy should be simply to prevent and manage waste by the method or combination of methods that is most cost-effective, utilizing strict principles of cost accounting.

ISRI strongly supports the bill's goal of "recycling of waste to the maximum extent consistent with market demand for recycled materials, and the creation and strengthening of markets for recycled materials." This provision recognizes that increased demand for products made from materials diverted or recovered from solid waste is the foundation of sustained recycling. The purchasers of the output of the nation's paper mills, iron and steel makers, metals refiners, and glass plants, to the extent that they specify products containing recovered materials, will be the prime movers behind increased solid waste recycling.

If additional amounts of these materials are diverted from the solid waste stream as a result of a national initiative, manufacturers will have to correspondingly increase their consumption of secondary inputs. Otherwise, recovered materials will simply end up in warehouses or, ultimately landfills. In short, recycling is a demand-driven phenomenon; absent increased demand, source-separation and collection of "recyclables" will not bring about true recycling.

Section 104 (a): This section should amend the existing definition of "solid waste" so as to clearly delineate EPA's jurisdiction over "discarded materials," but not over obsolete materials which never are discarded into the solid waste stream or which are separated from it for purposes of materials recovery. At present, there is much confusion over the extent of the Agency's jurisdiction over "discarded materials." EPA asserts that obsolete materials, such as scrap metal and spent lead-acid batteries, are "discarded materials," even when they have been segregated or diverted from solid waste precisely because they have value and are destined for recycling into new metal. This appears clearly erroneous in light of the decision of the United States Court of Appeals in *American Mining Congress v. EPA*, 824 F.2d 1177 (D.C. Cir. 1987), holding that the statutory definition of "solid waste" in section 1004)(27) applies only to "materials that are truly discarded, disposed of, thrown away or abandoned." 824 F.2d at 1190. EPA, however, contends that the AMC decision applies only to a few in-process waste streams in the petroleum refining and mining industries. *See* 53 Fed. Reg. 519 (Jan. 8, 1988). Any legislation reauthorizing the Act must reiterate in language even EPA cannot evade that Congress does not intend to define as solid waste materials that are in fact recycled by being reclaimed. To this end, we recommend that the following language be added to the existing definition of "solid waste": "and does not include recovered material which is recycled". (*See* definition of "recovered material" in section 1004(19) and recommended definition of "recycled" below.)

Section 1004 also needs a definition of "recycle", "recycled", and "recycling". The bill is replete with references to these key terms. ISRI recommends the following definition: "The terms 'recycle', 'recycled', and 'recycling' mean the diversion or recovery of materials from solid waste and their reuse as raw materials in manufacturing operations, including collection, consolidation, and mechanical preparation or processing prior to such reuse, but do not include the speculative accumulation of any material, as may be defined in regulations promulgated by the Administrator."

This definition, in tandem with the recommended amendment to the definition of "solid waste," will guide EPA in drawing a sharp distinction between obsolete materials destined for bona fide recycling and those which are truly discarded. Even without the companion amendment, this definition is necessary to ensure that "recycling" elements of state solid waste plans address the need for ultimate reuse of source-separated materials, as well as clarifying that, for purposes of achieving national percentage goals, the "recycling" that counts is that which involves actual reuse of recovered materials.

Section 201 (b): As amended, section 4001 would include as one of Subtitle D's objectives "to assist in developing and encouraging permitted capacity pursuant to the permit requirements in section 4010 ... to manage the nation's solid waste *recycling*, treatment, storage and disposal needs." (emphasis added). This language implies that section 4010 permits would be required for at least some recycling facilities, i.e., those that recycle materials separated from the solid waste stream.

As discussed in detail below, recycling facilities historically have not been, and should not now be, subject to regulation or permitting as solid waste management facilities. This and other references which inappropriately lump recyclers together with landfills, incinerators and impoundments should be deleted.

Section 202 (e): ISRI supports long-term solid waste planning by states, as required under amended section 4003(a)(6). Only by such long-term planning are states and municipalities likely to foresee and take the steps needed to establish sufficient solid waste management capacity and to preserve and expand recycling. (However, the referenc to "recycling facilities permitted pursuant to section 4010" again inappropriately implies that recyclers would be subject to a new permit requirement and should be deleted.)

State planners should be affirmatively required, during the planning process, to quantify that portion of the 20-year solid waste stream which will be diverted, processed and marketed for reuse, as well as the residual wastes that will be generated by recycling facilities. As commercial recyclers can attest, recycling almost always generates wastes (albeit in substantially reduced volumes) along with recovered materials. Indeed, the main function of many scrap processing operations is to process obsolete material so as to segregate reusable material, e.g. metals from an old automobile or usable fractions of mixed paper, from non-usable residues. Long-term assured disposal options for such residuals will be essential if recycling is to be maintained, let alone intensified.

Congress should expressly require state plans to quantify the amount of waste expected from recycling operations (as distinct from generators not engaged in volume-reduction) and to guarantee priority access to permitted disposal capacity for those wastes.

Section 202 (f): Amended section 4003(a)(8) would require a state plan to include "a process for curbside pick-up of source separated materials or source separation at facilities" as necessary to achieve recycling goals. This language should be amended to clarify that the mandated separation process would apply only to household waste, rather than wastes from industrial plants or commercial facilities. (This is already implicit, since the process is mandated in order to achieve "recycling goals," i.e., the goal under section 5001(a)(2) of 25% "municipal solid waste recycling within four years.") Mandatory source serparation by commercial or industrial facilities could seriously disrupt current arrangements whereby scrap materials from these sources are purchased, processed and recycled.

In prescribing the contents of the 20-year plan, section 4003(a) omits a critical feature, i.e., due consideration for the existing commercial recycling industries. Such a feature would help preserve the vitality of private sector recyclers and maintain the huge amounts of recycling already being done, while ensuring that states do not expend public resources (including federal grant monies) unnecessarily to construct or operate recycling facilities.

For this purpose, the following language should be added to paragraph 8: "The plan shall require laws, regulations and ordinances, as necessary, to assure that recycling facilities in existence on the date of enactment of this paragraph are accorded priority consideration in the development and implementation of the plan, including without limitation requirements that state authorities or regional or local planning units (i) consult with such recyclers in developing such plans and (ii) utilize the facilities and services of such recyclers to the maximum extent practicable, unless such facilities or services are otherwise available at a lower total cost to the authority or unit."

Section 203(a): Section 4010(a) should expressly exclude recycling facilities from the new Subtitle D permitting program. As written, this section mentions only "storage, treatment and disposal" (not recycling) as activities for which a permit is required. However, if recovered materials destined for recycling are not excluded from the universe of solid waste (see above), this provision might be interpreted as requiring a permit for the storage of recovered materials prior to or during recycling operations.

This would be both an unworkable and unnecessary requirement. It would mean that each of the countless facilities in the existing recycling chain which temporarily accumulate recyclables would need a storage permit. Thus, permits would be required for every shopping center or industrial plant that generates source-separated scrap metal or paper; every auto dismantler who stores obsolete vehicles for recovery of parts; every scrap processor who produces upgraded scrap paper or scrap metal items; every facility where glass containers are processed into cullet; and every steel mill, foundry, paper mill, aluminum smelter, glass plant or other operation which inventories quantities of recovered material as feedstocks. (Alternatively, or in addition, each of the foregoing facilities might be considered to be engaged in "treatment" of recyclables by virtue of altering their form in some way, including consuming recyclables in production processes.)

To avoid needless proliferation of Subtitle D permits (and the attendant drain on state permit issuing and enforcement resources) facilities engaged in "recycling" (as defined above) should not be subject to permitting requirements. The exclusion would not expose the public to perceived risks incident to handling mixed garbage or commercial/industrial wastes at transfer stations or similar facilities. Under the definition of "recycling," only facilities receiving "recovered materials," i.e., materials already separated or diverted from the solid waste stream, would be exempt from permitting.

This distinction is well grounded in current state regulatory policies. We know of no state which requires facilities that handle scrap metal, paper, glass or plastics to obtain permits under state solid waste laws. In fact, in recently enacted solid waste management and recycling laws, the Pennsylvania and Florida legislatures specifically excluded facilities handling source-separated recyclable and/or recovered materials from the universe of regulated solid waste facilities.

In addition, the New York Department of Environmental Conservation recently adopted comprehensive new regulations for solid waste management facilities, under which scrap metal processors and certain other recycling facilities are exempt from otherwise applicable permit requirements. In effect, these states have confirmed the historic view that, once a material has been segregated or diverted from the refuse stream, it is fundamentally different from the types of discarded material whose handling should be subject to solid waste permitting and regulation.

We can see no justification for a radical departure from a status quo under which over 80 million tons of scrap materials--an amount equal to fully one-half of the nation's annual solid waste--were recovered and recycled last year, with unquestionable environmental benefits.

Section 204(a): New section 4011(i) would require existing solid waste facilities to submit information "demonstrating that the facility is not releasing hazardous substances into the environment or is controlling such releases through corrective action." Few if any existing landfills or other solid waste management facilities will be able to meet this "zero-release" standard. To impose such an impossible standard on existing facilities is all the more unreasonable in light of the much less stringent requirements that have applied to existing "interim status" hazardous waste management facilities under Subtitle C since 1980.

Section (206): New section 4013 prohibits exports of solid waste for the purpose of disposal, storage or incineration in the absence of an international agreement between the United States and the receiving country. Exempted are items discussed as "material exported for recycling identified under United States tariff codes as secondary recovery materials."

It would be wholly counterproductive to the pro-recycling objective of this legislation if this provision were inadvertently to halt the very active export trade in recycled materials. In 1987, the scrap processing and recycling industry shipped substantial volumes of non-hazardous recovered materials abroad: over 10 million net tons of iron and steel scrap, over 810,000 net tons of aluminum, copper, lead and zinc scrap and 4.4 million net tons of waste paper.

To close these markets or impair access to them would be a travesty. Therefore, it is essential that this section delineate clearly and accurately the materials that are not subject to the prohibition. The current language does not do so.

The 1988 Tariff Schedule of the United States, which governs the classification of imports for purposes of assessing duties and collecting statistics, contains no reference to "secondary recovery materials."

There are classifications for commodities prepared by the scrap processing and recycling industry for export in the U.S. Foreign Trade Statistical Classification of Domestic and Foreign Commodities Exported from the United States, Schedule B. On a monthly basis, the U.S. Department of Commerce analyzes the dollar and volume figures for these exports, as well as all others, to determine the U.S. balance of payments figure.

(Effective January 1, 1989 the United States will begin using the uniform international classification known as the Harmonized System. An illustrative listing of "secondary" materials and their names and numbers for purposes of proper export classification, showing a comparison between 1987 Schedule B and Harmonized System classifications, is attached. A similar comparison can be developed for cullet, scrap rubber, scrap plastic, etc. 1988 and 1987 Schedule B classifications for exported scrap materials recovered for recycling are substantially the same.)

Provided that appropriate definitional language is supplied in section 1004 of RCRA, such that the term "solid waste" clearly excludes recycled materials, it will not be necessary to identify in Section 206 those recycled materials to which the export prohibition does not apply. In the alternative, the Section 206 reference to a non-existent TSUSA classification "secondary recovery materials" should be replaced with "This prohibition shall not apply to recovered materials exported for recycling." The alternative would be to develop a cumbersome reference to numerous categories listed in the Harmonized System.

Section (301): Amended section 8001(a)(2) establishes a "national goal of 25% municipal solid waste recycling within four years, 50% within 10 years where recycling constitutes least cost disposal." ISRI questions whether the fixing of a numerical goal for recycling is appropriate, given the market-dependent nature of recycling, or whether a 25% target has any empirical basis.

The underscored language raises further questions about the relationship of the hierarchy set forth in section 1003(b) to the cost-effectiveness of the various options. Does this language mean that a 25% recycling rate should be achieved in the first four years regardless of the cost relative to other disposal options, whereas for the next 25% cost-effectiveness governs the utilization of recycling as opposed to another option? If so, what is the rationale for this approach?

Amended section 8001(a)(3) would require EPA to establish a program to "provide outreach and technical assistance to the industrial community and states on waste reduction and recycling methods and opportunities, and to the educational community to promote the introduction of waste reduction and recycling principles into engineering and management curricula."

It is at least as important for EPA to encourage and assist manufacturers to make products which can be safely and economically recycled when worn out or discarded. Therefore, after the word "opportunities" the following should be added: "and on methods and criteria for product design or redesign to optimize recyclability."

Similar language should be included wherever the bill refers to "waste reduction and recycling," e.g., section 8002 (duties of EPA Office of Waste Minimization); section 8003 (grants for state waste reduction and recycling programs); section 8004 (waste reduction and recycling clearing house). These minor changes would assure that the mandated waste minimization program does not focus only on the immediate goal of recycling or reducing wastes from industrial or commercial operations but also on the equally important need to maximize the recyclability of the products of those operations at the end of their life-cycle.

Section 310 (a-c): ISRI strongly supports the inclusion in the Act of the concept of evaluating the disposal/incineration impacts of products containing hazardous constituents. However, ISRI recommends that the word "recycled" be inserted after "incinerated" in subsection (a).

Experience shows that products periodically are introduced in commerce despite their potential for releasing hazardous substances during recycling operations, sometimes with the federal government's blessing. (An example is EPA's 1979 approval for the continued use of PCB small capacitors in many household appliances then in existence. If those appliances are recycled, PCBs can be released into processors' residues, creating liabilities so serious that, as a practical matter, such appliances can become non-recyclable. Another example is the use of air bags in automobiles pursuant to DOT regulations. The airbags contain a propellant -- sodium azide -- that is a listed hazardous waste under EPA's Subtitle C regulations. As airbags become widespread, the potential for releases of the propellant during recycling operations may adversely affect the recycling of airbag-equipped vehicles.)

While ISRI supports the toxics-control strategy which underlies this section, we believe that the program would be more effective if it were focussed on substances, rather than products. Under the present language of section 310(a) EPA must identify ten "products" annually for review. Identification of certain hazardous substances, known to have adverse health effects and to be used in consumer products, e.g., cadmium, would be more efficient. All of the products containing cadmium could then be identified and evaluated. This would ensure that all significant sources of cadmium in the solid waste stream were addressed.

ISRI urges amendment of paragraphs (b) and (c) to require the elimination of non-essential toxics from consumer products, as distinct from reliance on EPA regulation of facilities that must manage them. It is axiomatic that toxics, once dispersed in products, are hard to when removed from service effectively keep out of the environment. It is far preferable that they not be used in the first place, if a feasible substitute is available.

Moreover, prudent recyclers would be reluctant to handle products which carry a known toxic risk and which would subject their facilities to additional regulations under section 8010(b). Alternatively, recyclers would have to charge generators of such items enough to cover the increased costs of complying with the new regulations, in which case many generators might seek to avoid those costs through unauthorized disposal. Either way, new regulations governing the recycling of certain products would create new disincentives for their recycling.

Section 8010(c) offers a more effective and enforceable approach -- prompt review of "problem products" (or substances) under section 6 of TSCA, with possible regulation at the product manufacture stage. For example, EPA might conclude that the use of cadmium for cosmetic purposes in automobile seat covers presents "an unreasonable risk to health or the environment" during recycling, incineration and/or disposal of junk autos. In that case, further use of cadmium for that purpose could be banned under TSCA and additional requirements imposed on manufacturers to provide for the retrieval and safe disposal of the cadmium-bearing materials now in service. (Alternatively, if such materials are left in service without recall, recyclers to whom the autos will eventually be delivered for recycling should be exempted from regulatory liabilities resulting from the presence of cadmium in the vehicles.) While undeniably burdensome for auto makers, this approach would be far more efficient than allowing continued use of the substance and hoping that millions of auto seats could be effectively captured for regulated recycling by willing recyclers many years later.

(Interestingly, there appears to be a recent precedent for mandatory, uncompensated manufacturer recalls of unsafe products in the pesticide cancellation provisions of the FIFRA amendments adopted by Congress on September 28, 1988.)

In short, ISRI urges revision of the bill to make TSCA review and regulation at the "front end" of the product design and manufacturing process the presumptive approach to controlling the risks identified pursuant to section 310(a).

Section 8010(e): The mandate for EPA "performance standards" to protect public health and the environment from "hazards associated with recycled lead-acid batteries" is redundant and unnecessary. EPA has already considered the appropriate degree of regulation of persons in the battery recycling chain in the exhaustive rulemaking proceedings which culminated in the redefinition of "solid waste" in EPA's Subtitle C regulations in early 1985 and accompanying standards for management of hazardous "recyclable materials," including batteries which are destined for recycling. See 40 C.F.R. Parts 261, 266.

EPA also conducted a thorough study of the impacts of regulation on the battery recycling system in 1987. Far from recommending additional regulation, that study, prepared by Putnam, Hayes and Bartlett, Inc., reported a "clear downward trend" in battery recycling rates, with a corresponding increase in the number of batteries "exiting the recycling chain." It noted evidence that "the fear of environmental regulations . . . among scrap dealers and smelters has caused an exodus that may not be reversed even with . . . higher lead prices . . . ." The report cautioned that EPA must "understand the impact of the regulations on the recycling chain so that well-intended regulations do not inadvertently increase environmental problems by hampering the lead-acid battery recycling process."

In light of these conclusions, ISRI urges Congress to refrain from mandating a rulemaking exercise on a subject which EPA has thoroughly considered and for which it has already adopted regulations designed to strike a balance between over-regulation and maintenance of lead-acid battery recycling levels.

Section 8010 (f): ISRI strongly supports the inclusion of this section in the bill as a first step toward a rational adjustment of the liability provisions in section 107(a) of CERCLA/SARA to the realities of recycling. As drafted, however, this subsection has some significant deficiencies.

First, the subsection does not define the term "battery recycler." If ISRI's recommended definition of "recycler" is adopted (see above), no further definition would be needed -- a batter recycler would be any person who collects, consolidates, processes or smelts batteries. If the definition is not adopted, a definition of "battery recycler" embracing persons at every level of the recycling chain must be included.

Second, the subsection precludes recovery of "response costs or damages resulting from a release or threatened release of recycled lead-acid batteries." However, it is the contents of batteries -- not batteries themselves -- which may be released in a manner requiring response. The language should therefore refer to " a release or threatened release of a hazardous substance from recycled lead-acid batteries."

Third, the requirement that recycled batteries be "stored, treated, transported, or otherwise managed in compliance with regulations or standards promulgated under subsection (b) of this subsection" (emphasis added) is exceedingly restrictive and will be counterproductive. This language apparently would confer the exemption only prospectively, i.e., it would not exempt pre-enactment shipments of batteries to a Superfund site. Scrap dealers who historically purchased and consolidated batteries for resale to smelters already face huge and unwarranted liabilities under section 107(a)(3) of CERCLA, which the bill would thus do nothing to address. Indeed, if the exemption remains merely prospective, litigation of cases in which the exemption is invoked will be tremendously complicated by the requirement for shippers of batteries to the cleanup site to prove which shipments were post-enactment and therefore exempt from liability.

Furthermore, even as regards future shipments of batteries, the quoted language would defer the important benefits of the exemption for the duration of a possibly prolonged rulemaking.

To address both of these defects, the underscored language should be amended to read "then applicable regulations or standards promulgated by the Administrator, if any." This would mean that battery recyclers could qualify for the exemption by complying with whatever regulations (if any) were in effect at the time of the shipments, including pre-enactment shipments.

Second, inasmuch as the exemption is intended to cover only "off-site" liability, i.e., the liability that would otherwise attach to a "generator" or "transporter" of recycled batteries under section 107(a)(3) or (4) of CERCLA, a generator or transporter should be exempt from liability if it has complied with such regulations as are applicable to its handling of recycling batteries. The generator or transporter should not be required to prove that its transferees also complied with all regulations applicable to them. Otherwise, battery shippers remain in the impossible position of being guarantors of third parties' conduct, in which case the exemption would be of very limited utility.

Third, the syntax and punctuation of section 8010(f) are unclear, and render the provision susceptible of several different readings. For example, one tenable reading of the language is that no person except the site owner or operator can recover from a battery recycler under the generator and transporter provisions. Obviously, such a reading would provide little meaningful protection to persons who ship batteries to recycling facilities.

Section 311: ISRI strongly supports the mandate for federal procurement of products containing substantial amounts of recovered materials. The importance of stimulating demand for recycled inputs cannot be overstated. Nor could the contrast between this recycling strategy and most "mandatory recycling" programs be clearer, as is well illustrated by the case of waste paper.

The fact that waste paper forms a large part of the municipal solid waste stream frequently triggers a recommendation that government funds be made available either for the purchase of paper baling equipment so that this paper can be "recycled" or for price supports for would-be recyclers. Either step could, at best, allow more waste paper to be collected and/or baled.

If the market for such baled paper does not also expand to absorb the paper temporarily diverted from the waste stream, the recipients of govenment largesse will merely inundate the market to the detriment of other firms who have relied on private capital for their investments in recycling capabilities. No increase in actual paper recycling will occur; public monies will simply be shifted to to the pockets of the favored entities.

By contrast, an aggressive federal procurement program for recycled products is a market-oriented policy option. Increased governmental purchases of products made with recovered (pre- and post-consumer) fiber will provide paper manufacturers with a market into which to sell recycled paper products and, in turn, scrap paper processors with a market into which to sell additional amounts of paper diverted from the solid waste stream and collected and processed for reuse.

Congress must recognize that the scrap paper processor's demand for scrap paper is driven by the paper mill's need for a raw material which, in turn, is derived from consumer preference for paper products made from recovered materials. Increasing such final demand -- not adding capacity to collect or process waste paper into potentially usable raw materials -- is the only way to achieve a sustained increase in the already very significant levels of paper recycling.

The procurement provisions of this section are a step in the right direction, not only for paper products but for all of the products for which affirmative procurement would be required.

"ISRI Supplemental Comments: Attachment A"

CONCORDANCE
1987 Schedule B to HS Numbers

Commodity	Old	HS	Check Digit	Units
PAPER				
News	250.0450	4707.30.0020	8	t
Deinking	250.0460	4707.20.0020	0	t
Pulp Subst.	250.0465	4707.30.0040	4	t
Corrugated	250.0470	*4707.10.0000	6	t
Other[1]	250.0485	*4707.10.000	6	t
		4707.20.0040	4	t
		4707.90.0000	9	t
TEXTILE				
Used Apparel	818.4000	6309.00.0000	5	kg
Rags & Scrap-Cotton[2]	390.3500	*6310.10.0000	0	kg
		*6310.90.0000	3	kg
Rags & Scrap--Wool[2]	390.4500	*6310.10.0000	0	kg
		*6310.90.0000	3	kg
Rags & Scrap--MMF[2]	390.5500	*6310.10.0000	0	kg
		*6310.90.0000	3	kg
Rags & Scrap-Other[2]	390.6500	*6310.10.0000	0	kg
		*6310.90.0000	3	kg
CARBON STEEL				
No. 1 HM	607.0810	7204.49.0020	8	t
No. 2 HM	607.0815	7204.49.0040	4	t
No.1 Bnd.	607.0820	7204.41.0020	6	t
No. 2 Bnd.	607.0825	7204.41.0040	2	t
Borings	607.0830	7204.41.0060	7	t
Shredded	607.0835	7204.49.0070	7	t

Iron Scrap (Cast)	607.0840	7204.10.0000	7	t
Cut P&S	607.08420	7204.49.0060	9	t
Other[3]	607.08460	7204.30.0000	3	t
		7204.41.0080	3	t
		7204.49.0080	5	t
		7204.50.0000	8	t
ALLOY STEEL				
Stainless	607.0910	7204.21.0000	4	t
Alloy	607.0920	7204.29.0000	6	t
NONFERROUS				
Cu-Alloyed	612.0920	7404.00.0050	6	kg
Cu-Unalloyed	612.0940	7404.00.0020	3	kg
UBC	618.1060	*7602.00.0030	1	kg
Aluminum	618.1080	7602.00.0090	8	kg
Nickel	620.0400	7503.00.0000	7	kg
Lead	624.0400	7802.00.0000	5	kg
Zinc	626.1000	7902.00.0000	4	kg

NOTES

* HS classification taken from two or more previous classifications.

a.	4707.10.0000	derived from	250.0470 250.0485
b.	6310.10.0000	derived from	390.3500 390.4500 390.5500 390.6500
c.	6310.90.0000	derived from	390.3500 390.4500 390.5500 390.6500
d.	7602.00.0090	derived from	618.1020 (RSI) 618.1080

1 Commodity descriptions for HS codes into which "Other Paper and Waste" is broken are:

4707	Waste and scrap of paper & paperboard
4707.10.000	Of unbleached kraft paper or paperboard or of corrugated paper or paperboard
4707.20	Of other paper or paperboard, made mainly of bleached chemical pulp, not colored in the mass:
4707.20.0040	Other
4707.90.0000	Other, including unsorted waste & scrap

2 Commodity descriptions for HS codes into which "Rags & Scrap-Cotton", "Rags & Scrap-Wool", "Rags & Scrap-MMF", and "Rags & Scrap-Other" are broken are:

6310	Used or new rags, scrap twine, cordage, rope, and cables, and worn-out articles of twine, cordage, rope or cables, of textile materials:
6310.10.0000	Sorted
6310.90.0000	Other

3 Commodity descriptions for HS codes into which "Other Carbon Steel" is broken are:

7204	Ferrous waste & scrap; remelting scrap ingots of iron or steel:
7204.30.000	Waste & scrap of tinned iron or steel
7204.41	Other waste & scrap: turnings, shavings, chips, milling waste, sawdust, filings, trimmings and stampings, whether or not in bundles:
7204.41.0080	Other
7204.49	Other:
7204.49.0080	Other
7204.50.0000	Remelting scrap ingots

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TESTIMONY

RICHARD C. FORTUNA
EXECUTIVE DIRECTOR
HAZARDOUS WASTE TREATMENT COUNCIL

ON

S. 2773 THE WASTE MINIMIZATION AND CONTROL ACT

BEFORE

SUBCOMMITTEE ON HAZARDOUS WASTE AND TOXIC SUBSTANCES
ENVIRONMENT AND PUBLIC WORKS COMMITTEE
U.S. SENATE

SEPTEMBER 22, 1988

Mr. Chairman, Senator Durenberger, members of the Committee, I appreciate the opportunity to testify before you this morning on S. 2773, The Waste Minimization and Control Act. I am Richard C. Fortuna, Executive Director of the Hazardous Waste Treatment Council. My testimony this morning will focus on the provisions dealing with infectious waste controls and the funding mechanism for state solid waste and recycling programs. The Council will provide the Committee with additional comments and recommendations on the balance of the bill in the very near future.

I. BACKGROUND ON THE COUNCIL

The Treatment Council is a national association of firms committed to the primary use of high-technology treatment and to the restricted use of land disposal in the management of hazardous waste. The Council is the largest organization representing commercial hazardous waste treatment, management firms and equipment manufacturers. The Council's member companies are engaged in the treatment and management of hazardous wastes through the use of reclamation, solidification, fixation, neutralization, chemical and biological destruction and treatment; thermal destruction through the use of incineration, cement kilns and other industrial furnaces, wet oxidation, and pyrolysis; and, the appropriate use of land disposal subject to necessary restrictions and pretreatment. Several members of the Council are being approached by local and state governments to assist in addressing the infectious waste problem and establishing appropriate facilities for proper management.

II. INFECTIOUS WASTE

A national program for the regulation of biomedical wastes is needed to provide a minimum baseline. Because of public fear spawned by the AIDS epidemic, state governments are "under the gun" to produce regulations. Increasingly firms in the hazardous waste industry are being called upon by generators of infectious wastes as well as local and state governments to operate technology-based facilities for the management of infectious waste. However, the current mosiac and rapid flux of state regulations in light of recent events, creates a difficult environment for technology-based firms to plan intelligently for infectious waste management. Vast disparities in regulatory control exist at the state level. Just as with hazardous wastes in the late 1970s, national minimum standards are necessary for certain key elements of an infectious waste management program to ensure that waste havens do not proliferate and otherwise undermine good intentions.

A. State Actions are Underway

Perhaps the best bellweather of the infectious waste problem is found in the rapid development of legislation at the state level. Legislative actions are currently underway in Michigan (a bill is under development), Alabama (emergency regulations have been promulgated and a task force organized), and Utah (legislation was passed this summer directing the promulgation of regulations). Of particular note is the fact that these same states only last spring stated that they had no plans for addressing this issue in respone to a Council of State Governments' survey on infectious waste standards.

B. State Approaches Differ Substantially

1. Incinerator Standards

Oklahoma promulgated biomedical waste rules on April 28, 1988 that specified incinerator performance standards for "a minimum temperature of 1400 degrees Fahrenheit in the primary chamber . . . and 2000 degrees Fahrenheit in the secondary chamber for a minimum residence time of two (2) seconds."

On March 15, 1988, Missouri's Department of Natural Resources published its Infectious Waste Management rules. These rules require that infectious waste incinerators achieve a minimum temperature of 1800 degrees Fahrenheit in the secondary chamber with a minimum retention time of one-half second.

2. Definition of Infectious Waste

Massachusetts defines infectious waste as "waste which because of its infectious characteristics may (1) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness, and (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed."

Rhode Island (Health Department) defines infectious waste both by characteristic and by listing: "waste which contains pathogens with sufficient virulence and quantity so that exposure to the waste by a susceptible host could result in disease. (Under this definition the normal microflora of the body are not classified as infectious.)"

Illinois' Solid Waste and Special Waste regulations define infectious waste as "waste which has been generated by a hospital in connection with patient care that is contaminated with or may be contaminated with an infectious agent that has the potential of inducing an infection and which has not been rendered innocuous by sterilization or incineration." The regulations continue with listing categories of wastes.

Some states mandate treatment, while others do not. New Hampshire's rule states that "all infectious waste shall be adequately treated, before disposal . . ." Pennsylvania states that "infectious waste may not be disposed at a municipal waste landfill unless . . . [treated]."

Some states have small quantity generator exemptions (California, Illinois), but most do not.

3. Federal Technical Assistance is Unavailable

   Inconsistencies in state requirements are due to no centralized reference point for information on this type of waste. No local or state government has the resources to compile critical data (acceptable performance standards, ash constituents, strength of storage containers, minimum training for handlers, etc.) needed for rule development.

4. Some States Have Decided to Wait Until US EPA Establishes a Program

   Montana is supportive of a federal baseline program because manpower is at a premium and regulation development is very time consuming. Idaho appears to be in a holding pattern. Utah's statute directing the promulgation of infectious waste rules contains the requirement that any such rules be enacted corresponding to federal law.

5. It Takes Time to Write New Legislation and to Complete Rule Promulgation

   South Carolina's infectious waste bill did not make it through the State's General Assembly this year so that the State still has to rely on a 1983 policy that infectious waste should be incinerated. Virginia's draft rule have yet to be proposed. Florida's Department of Health and Rehabilitive Services is in the process of writing rules for the handling of infectious waste that should be completed in early 1989. Minnesota's Attorney General's Office has just completed a study that concludes the need for infectious waste legislation. The list goes on . . .

C. Minimum Baseline Requirements--What Should Be Included In the Federal Program?

- Definitions of biomedical and infectious waste (making clear that this portion is a subset of biomedical) that are enforceable.
- Requirements for segregation, packaging and labeling.
- Storage requirements.
- Simple recordkeeping requirements and tracking requirements.
- Treatment of certain infectious wastes before landfilling.
- Coordination of air, solid waste, and water permits for treatment and disposal facilities.
- Performance standards for treatment. Treatment standards should be the same regardless of whether the wastes are treated on or off-site, and in the case of incineration specify minimum performance standards

(i.e., residence time, temperature).

- Delegated state program with adequate monies for regulation development and implementation (including outreach to the regulated community).
- Technical assistance provide by U.S. EPA.
- A citizen suit provision, to prompt timely and proper enforcement.

II. STATE PROGRAM FUNDING AND OTHER PROVISIONS

We commend the Chairman for specifically addressing the issue of resources to operate state solid waste, infectious waste and recycling programs. Resources are at the heart of any successful program, for no matter how sound the legislation and how good the regulations unless there are sufficient and capable people to both implement and enforce these directives, they are little more than paper exercises. In fact, it is our view that resources, or the lack thereof, are at the heart of growing tensions between Federal and State hazardous waste management programs. We should learn from this experience and ensure that this legislation contains either the fee structure provided in the bill, Federal appropriations or some other means to provide the resources for these directives.

With regard to other provisions of the bill, the Council:

- support the bill's approach to permitting and standard setting for solid waste management facilities, including minimum technology requirements for disposal facilities;

- support the prohibition on the export of solid waste, except for international agreements that exist between the United States and the receiving country;
- supports the bills goals of solid waste minimization and recycling and technical assistance to state and local programs; and
- support the bills attempt to compliment RCRA controls on hazardous wastes with similar controls on the burning and disposal of products containing hazardous substances through the use of Toxic Substances Control Act. Simply because something is not technically designated as a "hazardous waste" under RCRA does not exempt the facility from proper management requirements.

I appreciate the opportunity to present this testimony and will be happy to respond to your questions and provide additional information as the Committee desires.

II

100TH CONGRESS
2D SESSION

S. 2773

Entitled the "Waste Minimization and Control Act of 1988", to amend the Solid Waste Disposal Act and extend the authorization through 1992.

IN THE SENATE OF THE UNITED STATES

SEPTEMBER 9 (legislative day, SEPTEMBER 7), 1988

Mr. BAUCUS (for himself and Mr. DURENBERGER) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

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A BILL

Entitled the "Waste Minimization and Control Act of 1988", to amend the Solid Waste Disposal Act and extend the authorization through 1992.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

WASTE MINIMIZATION AND CONTROL ACT OF 1988

SECTION 1. SHORT TITLE AND TABLE OF CONTENTS.

This Act may be cited as the "Waste Minimization and Control Act of 1988".

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TITLE I—GENERAL AMENDMENTS

SEC. 101. CONGRESSIONAL FINDINGS.

(a) Section 1002(b) of the Solid Waste Disposal Act is amended by adding the following after paragraph (8):

"(9) the Nation continues to generate enormous volumes of both hazardous and solid waste each year which present human health and environmental problems from hazardous substances in waste and leachate.

"(10) too many communities cannot site new solid waste facilities and are managing waste in existing units not designed with the best available environmental controls or are engaged in long distance uneconomic transportation of wastes to other communities and States.

"(11) the generation of waste containing hazardous substances must be reduced and recycled to protect human health and the environment and to minimize capacity problems.".

SEC. 102. OBJECTIVES AND NATIONAL POLICY.

(a) Section 1003(a)(4) of the Solid Waste Disposal Act is amended by inserting after "hazardous waste" the term "and solid waste".

(b) Section 1003(a)(5) of the Solid Waste Disposal Act is amended by inserting after "hazardous waste" the term "and solid waste".

(c) Section 1003(a)(6) of the Solid Waste Disposal Act is amended by inserting after "hazardous waste" each time it appears, the term "and solid waste".

(d) Section 1003(a) of the Solid Waste Disposal Act is amended by adding the following after paragraph (11):

"(12) establishing a Federal-State partnership that ensures waste management capacity protective of human health and the environment.

"(13) minimizing the need to transfer waste among jurisdiction to maximize local responsibility for solid waste management.".

(e) Section 1003(b) of the Solid Waste Disposal Act is amended to read as follows:

"(b) NATIONAL POLICY.—The Congress hereby establishes a waste prevention and management policy that gives highest priority: first, to source reduction, second, to recycling, third, to material and energy recovery, fourth, to waste treatment, and fifth, to contained disposal so as to minimize the present and future threat to human health and the environment. Congress further establishes as a national goal the recycling of waste to the maximum extent consistent with market demand for recycled materials, and the creation and strengthening of markets for recycled materials.".

SEC. 103. GENERAL AUTHORIZATION

(a) Section 2007 of the Solid Waste Disposal Act is amended by deleting "and $80,000,000 for the fiscal year 1988" and adding "$80,000,000 for the fiscal year ending September 30, 1988, $140,000,000 for the fiscal year ending September 30, 1989, $140,000,000 for the fiscal year ending September 30, 1990, $140,000,000 for the fiscal year ending September 30, 1991, and $140,000,000 for the fiscal year ending September 30, 1992,

SEC. 104. DEFINITIONS.

(a) Section 1004 of the Solid Waste Disposal Act is amended by inserting after paragraph (12) the following

paragraph and renumbering the succeeding paragraphs accordingly;

"(13) The term 'modified municipal waste incineration unit' means a municipal waste incineration unit at which modifications have occurred after the effective date of a standard under section 4011 (a) or (d) if (A) the cumulative costs of the modifications, over the life of the unit, exceed 50 percent of the original cost of construction and installation of the unit (not including the cost of any land purchased in connection with such construction or installation), or (B) the modification is a physical change in or change in the method of operation of the unit which increases the amount of any air pollutant emitted by the unit for which standards have been established under this section.

"(14) The term 'municipal waste incineration unit' means a distinct operating unit of any facility at which the combustion of any solid waste material collected from commercial or industrial establishments or the general public (including single and multiple residences, hotels, and motels) occurs. Such term does not include incinerators or other facilities required to have a permit under section 3005 of the Solid Waste Disposal Act.".

(b) Section 1004 of the Solid Waste Disposal Act is amended by inserting after pargaraph (13) the following

paragraph and renumbering the succeeding paragraphs accordingly;

"(15) The term 'new municipal waste incineration unit' means a municipal waste incineration unit (A) the construction or modification of which is commenced after the Administrator proposes requirements under this section establishing emissions standards or other requirements which would be applicable to such unit, or (B) effective January 1, 1992, (i) which had commenced operation 20 years or more previously; or (ii) which had reached the date of maturity for any long-term debt issued to finance the unit, whichever date occurs first.".

(c) Section 1004 of the Solid Waste Disposal Act is amended by inserting after paragraph (33) the following paragraph and renumbering the succeeding paragraphs accordingly;

"(34) The term 'substantially completed unit' means a unit not in operation before January 1, 1989 for which the addition of required pollution control equipment will cost more than twice what such equipment would have cost had it been constructed as part of the permitted design.".

(d) Section 1004 of the Solid Waste Disposal Act is amended by inserting after paragraph (3) the following

paragraph and renumbering the succeeding paragraphs accordingly;

"(4) The term 'existing municipal waste incineration unit' means a municipal waste unit which is not a new or modified municipal waste incineration unit.".

TITLE II—SOLID WASTE MANAGEMENT

SEC. 201. OBJECTIVES OF SUBTITLE.

(a) SUBTITLE D.—State or regional solid waste plans is amended by redesignating the title as "Solid Waste Management".

(b) Section 4001 of the Solid Waste Disposal Act is amended by replacing the first sentence as follows: "The objectives of this subtitle are—

"(1) to assist in developing and encouraging methods for the disposal of solid waste that are environmentally sound and that maximize the utilization of valuable resources including energy and materials that are recoverable from solid waste;

"(2) to assist in developing methods to encourage resource conservation;

"(3) to assist in developing and encouraging permitted capacity pursuant to the permit requirements in section 4010 and the capacity demands pursuant to section 4003 to manage the Nations solid waste recycling, treatment, storage and disposal needs; and

"(4) to use an integrated waste management hierarchy for solid waste management planning that is consistent with the policy and priority set forth in subsection 1003(b).".

SEC. 202. STATE AND REGIONAL PLANNING.

(a) Section 4002(b) is amended by striking "eighteen months after the date of enactment of this section" and inserting "six months after enactment of the Waste Minimization and Control Act of 1988", and by adding after "section 4001.", ", as amended by the Waste Minimization and Control Act of 1988".

(b) Section 4003(a) is amended by inserting "and issue permits under section 4010, each state must develop a plan that complies with the following minimum requirements." after "4007,".

(c) Section 4003(a)(2) is amended by inserting "until the permitting program established under section 4010 goes into effect" before "all solid waste".

(d) Section 4003(a)(5) is amended by inserting "permitting pursuant to section 4010" after "resource recovery facilities," and by inserting "permitted" after "facilities".

(e) Section 4003(a)(6) is amended to read as follows: "The plan shall provide that the State, directly or through regional or local planning units as may be established under subsection 4002(a)(1), shall identify the amount of solid wastes by waste type, including wastes from all categories listed in section 4011 and waste residuals that are reasonably expected to be generated within the State or accepted from another State during the ensuing 20-year period, and shall identify the volumes to be reduced through source reduction and recycling, and shall establish a process which assures the availability of solid waste treatment, storage, disposal and recycling facilities permitted pursuant to section 4010 with adequate capacity to manage all such solid wastes;".

(f) Section 4003(a) is amended by adding the following new paragraphs:

"(7) The plan shall require laws, regulations and ordinances for development of new solid waste management facilities including agreements with other States necessary to provide the capacity requirements identified pursuant to subsection (a)(6), including the establishment of a process for the siting of such facilities and a schedule for the approval and construction of such facilities. The plan shall reserve to the State authority to take such actions on behalf of a regional or local planning unit as are necessary to assure the availability of such capacity when such planning unit has failed in a timely way to provide adequate capacity or other mechanisms for dealing with the waste for which such unit is responsible pursuant to subsection (a)(6).

"(8) The plan shall establish a hierarchy among solid waste management practices based on the State's environmental and economic conditions consistent with the waste reduction and recycling goals pursuant to section 1003(b) as amended by this Act. The plan shall also include a process for curbside pickup of source separated material or source separation at facilities as may be necessary to achieve waste reduction and recycling goals.".

(g) Section 4006 is amended by inserting in the section title after the word "development", ", submission,".

(h) Section 4006 is amended by adding the following new paragraphs after (c)(4),

"(d) SUBMISSION OF PLANS.—No later than twenty-four months after promulgation of regulations pursuant to section 4002(b) as amended by the Waste Minimization and Control Act of 1988, each State shall submit a State plan to the Administrator for approval, a solid waste management plan that complies with the requirements of section 4003(a).".

"(e) FAILURE TO SUBMIT A STATE PLAN.—Effective thirty months after promulgation of regulations under section 4002(b), no Federal agency shall make any grant or loan or loan guarantee or issue any license or permit for any activity in any State which fails to submit its State plan to the Administrator unless a Federal agency can demonstrate that such activity shall not cause or contribute to the generation of solid waste.".

(i) Section 4007(a)(1) is amended by striking "and (5)" and inserting "(5), (6), (7) and (8)".

SEC. 203. PERMITS FOR DISPOSAL OF SOLID WASTE.

(a) Section 4010 is amended to read as follows:

"(a) PERMIT REQUIREMENT.—Effective one year after enactment of the Waste Minimization and Control Act of 1988, storage (excluding transportation-related facilities including loading docks, parking areas, storage areas and other similar areas where shipments of solid waste are held during the normal course of transportation), treatment or disposal of solid waste except in accordance with a permit issued pursuant to this section is prohibited. Effective one year from the enactment of this Act, transportation of solid waste for storage, treatment or disposal, or arrangement for the storage, treatment or disposal of solid waste, at any facility that does not have a permit issued pursuant to this section is prohibited. Existing solid waste facilities shall be treated as having a permit if information required pursuant to section 4011(i) has been submitted in the time required.

"(b) STATE CERTIFICATION.—Not later than one year after enactment of this Act, the Governor of each State shall submit to the Administrator a statement certifying that the laws of such State provide such regulatory authority and such personnel as may be necessary to implement a permit requirement required by this section, including, but not limited to, authority to—

"(1) issue permits under State law that—

"(A) meet the requirements of this section and assure compliance with any applicable standards promulgated by the Administrator under section 4011 within eighteen months after such promulgation or such earlier date as the Administrator may by rule establish;

"(B) can be revoked or modified for cause including, but not limited to, the violation of any condition of a permit or obtaining a permit by misrepresentation, or failure to disclose fully all relevant facts;

"(2) inspect, monitor, enter at reasonable times, and require reports to the extent necessary to assure compliance with this subtitle;

"(3) insure that the public receives notice of each application for a permit and provide an opportunity for public hearing before ruling on each such application; and

"(4) allow abatement of violations of a permit or this subtitle, including civil and criminal penalties and other ways and means of enforcement.

"(c) STATE AUTHORITY TO ISSUE PERMITS.—Except as provided in subsection (d), upon a determination that a solid waste management facility complies with the requirements of this section including protection of human health and the environment, and any other applicable requirements of State law, the State in which the facility is located may issue a permit for such facility pursuant to the authority certified under subsection (b).

"(d)(i) ISSUANCE OF PERMITS BY THE ADMINISTRATOR.—The Administrator shall act in lieu of a State to issue or deny permits to solid waste management facilities within the State—

"(1) if such State has failed to submit the certification required under subsection (b);

"(2) if, following notice and opportuntity for a public hearing, the Administrator finds that the State lacks adequate regulatory powers under State law to implement the permitting requirement and enforce permit violations established by this section;

"(3) if a State shall have failed to submit a plan pursuant to section 4006 which meets the requirements of this Act; or

"(4) if following notice and opportunity for a public hearing, the Administrator finds that the State fails to exercise regulatory authority as required by this Act.

"(ii) EXISTING PERMITS.—Any permit issued by a State prior to a finding pursuant to (d)(i) shall remain in effect until the Administrator acts.

"(e) PERMIT CONDITIONS.—Any permit issued pursuant to this section shall, within eighteen months of promulgation of any applicable standards by the Administrator pursuant to section 4011, contain such conditions as will assure compliance with such standards. In the absence of applicable standards under section 4011, the permit shall contain such conditions as the State (or Administrator), based on the exercise of its best professional scientific and engineering judgment taking into account appropriate regulations and requirements adopted by other States or solid waste management authorities and on consideration of the factors listed in this subsection, deems necessary to protect human health and the environment. Any permit issued under this section, the State (or the Administrator) shall, at a minimum, include provisions which specify—

"(1) the types of wastes handled by the facility, their toxicity, mobility or other potential to adversely affect human health or the environment, and include measures to mitigate such potential, including but not limited to special handling requirements, liners and leachate collection systems;

"(2) design of the facility in relation to the location of the facility, including its hydrogeologic and climatological settings, and its proximity to biological or cultural resources and sources of drinking water;

"(3) air and ground water monitoring necessary to identify any potential adverse effects on human health and the environment from discharge from such facility;

"(4) any necessary corrective action to prevent adverse effects on human health and the environment;

"(5) financial assurance for closure and post-closure care, recordkeeping and reporting and security;

"(6) measures necessary to prevent unlawful disposal of hazardous waste;

"(7) measures necessary to control precipitation run-on and run-off; and

"(8) restrictions on the receipt of liquids or measures to mitigate the potential adverse effects of such receipt.

"(f) PERMIT TERM.—Any permit issued pursuant to State authority certified under subsection (b) or by the Administrator pursuant to subsection (d) shall be for a fixed term not to exceed ten years, and shall be modified to require compliance with any applicable standard promulgated under section 4011 within eighteen months of promulgation of such standard. Nothing in this subsection shall preclude a State (or the Administrator) from reviewing and otherwise modifying a permit at any time during its term.

"(g) EFFECT OF COMPLIANCE WITH PERMIT.—Compliance with a permit issued by a State pursuant to authority certified under subsection (b) or the Administrator pursuant to subsection (d) shall be deemed compliance with the requirements of this subtitle.".

SEC. 204. SOLID WASTE MANAGEMENT GUIDELINES.

(a) Section 4011 is added to the Solid Waste Disposal Act to read as follows:

"(a)(i) IN GENERAL.—The Administrator, after consultation with appropriate Federal and State agencies and other interested persons, shall develop and promulgate guidelines establishing minimum design and operating standards for facilities that manage solid waste in the following categories—

"(1) for municipal solid waste, within twelve months of enactment of this Act;

"(2) for municipal waste combustion residues, within eighteen months of enactment of this Act;

"(3) for emissions from municipal waste incineration facilities within eighteen months of enactment of this Act;

"(4) for medical wastes including infectious hospital and laboratory wastes, within twelve months of enactment of this Act;

"(5) for materials generated from the exploration, development and processing of ores and minerals including heap and dump leach piles within eighteen months of enactment of this Act;

"(6) for industrial nonhazardous wastes handled in surface impoundments, within twenty-four months of enactment of this Act;

"(7) for drilling fluids, produced waters and other wastes associated with the exploration, development and production of oil, gas, and geothermal energy, within thirty months of enactment of this Act;

"(8) for underground injection of nonhazardous wastes not otherwise covered by this title within thirty-six months of enactment of this Act; and

"(9) for other solid wastes including but not limited to nonhazardous industrial wastes, cement kiln dust waste, and materials generated from the combustion of coal and other fossil fuels within forty-two months of enactment of this Act;

"(ii) If the Administrator determines that regulations established for each solid waste category under this section will not adequately protect human health and the environment, the Administrator shall regulate such wastes under subtitle C of RCRA.

"(iii) Within twelve months of enactment of this Act, and from time to time thereafter, the Administrator shall publish a notice in the Federal Register identifying any other solid waste categories for which standards are necessary or appropriate and specifying a schedule for promulgation of those standards. The Governor of any State may petition the Administrator to propose guidance for a category of waste not described in this paragraph.

"(iv) At the time the Administrator grants any petition under section 3001 of subtitle C to exclude a waste generated at a particular facility, the Administrator shall specify any design or additional operating standards appropriate for such waste.

"(d) GUIDELINES.—The guidelines promulgated by the Administrator pursuant to Subsection (a) shall provide for the protection of human health and the environment from the solid wastes within each category and shall take into consideration the circumstances presented by the particular solid waste category, as well as—

"(1) the sources and volumes of the solid wastes within the category, including their toxicity, mobility or other potential for adverse impacts on human health and the environment;

"(2) the potential danger, if any, to human health and the environment from current management practices;

"(3) documented cases of actual or threatened harm to human health or the environment; and

"(4) the types of solid waste management facilities and measures that can be used to mitigate any potential adverse effect on human health and the environment that are appropriate for the solid wastes generated within each source category and consistent with the climatological and hydrogeological setting of the facility and proximity to biological or cultural resources and sources of drinking water. The Administrator shall promulgate as appropriate for each solid waste category design and operating measures that include but are not limited to:

"(A) requirements with respect to siting of any source in the category including its proximity to karst terrain, seismic zones, wetlands, floodplains, and vulnerable or unmonitorable ground water;

"(B) requirements with respect to construction quality assurance with respect to installation of any source in the category;

"(C) requirements with respect to licensing or training for persons who install or operate any source in the category;

"(D) requirements with respect to the design of any source in the category including liners, leachate collection systems and cover requirements;

"(E) requirements with respect to the operation and maintenance of any source in the category including requirements for treatment prior to disposal and collection and treatment of any discharge of contaminants for the source;

"(F) requirements for taking corrective action in response to releases;

"(G) requirements for maintaining records of any leak detection, sampling or monitoring system associated with any source in the category; and

"(H) requirements for maintaining evidence of financial responsibility for closure, postclosure care, and corrective action; and

"(5) other Federal and State laws and regulations with a view toward avoiding duplication of effort.

"(c)(1) MUNICIPAL SOLID WASTE LANDFILLS.—Regulations promulgated under subsection (a)(1) of this section shall include, at a minimum, for each new and existing landfill the following requirements—

"(A) controls to detect and prevent the disposal of hazardous waste, nonhazardous bulk liquids and nonhazardous liquids in containers (other than household wastes). Such controls shall include random inspections of incoming loads, inspection of suspicious loads, records of inspections, training of facility personnel to recognize illegal materials, procedures for notifying the proper authorities if any regulated hazardous wastes are found, and precautions and penalties to prevent such offenses;

"(B) daily cover as necessary to control disease vectors, fires, odors, blowing litter and scavenging;

"(C) landfill gas monitoring and controls to ensure that concentrations of explosive gases beneath, around, or in facility structures (excluding gas control or recovery components) shall not exceed 25 per centum of the lower explosive limit for methane, or such level as the Administrator finds will control and recapture emissions of landfill generated gases to the maximum extent feasible. Such concentrations shall not exceed the lower explosive limit at the property boundary (or perimeter of a dedicated buffer zone);

"(D) access controls to protect human health and the environment and to prevent unauthorized vehicular traffic and to prevent illegal dumping of wastes;

"(E) run-on and run-off controls that will accommodate a twenty-four hour, twenty-five year storm without overtopping and with sufficient freeboard to accommodate expected set-up and wave action; diversion of all run-on around the landfill by means of ditches, berms, dikes or grading, and relocation of surface water bodies to flow around the perimeter of the landfill;

"(F) landfill closure that—

"(i) minimizes the need for further maintenance;

"(ii) ensures no adverse effects will be caused from postclosure releases to the ground water, surface water or atmosphere;

"(G) closure and postclosure care plans which identify for each facility the steps necessary to ensure closure and postclosure, time estimates, modifications to monitoring and collection systems, final cover and cost estimates. The postclosure care period shall be determined by results from the monitoring in the landfill including leachate quality and quantity and methane gas generation;

"(H) financial responsibility for closure and post-closure care;

"(I) ground water monitoring provided that, the Administrator is authorized to promulgate regulations to allow a variance from ground water monitoring requirements if the owner or operator can demonstrate to the satisfaction of the Administrator that there is no potential for migration of hazardous constituents from the landfill to the uppermost aquifer. The demonstration shall be certified by a qualified geologist or geotechnical engineer and shall be based on site specific data; and

"(J) corrective action of releases to air, water, and land to protect health and the environment.

"(2) At a minimum the regulations required under subsection (b) of this section shall require for each new landfill and lateral expansions to existing landfills for which new permits are required the following requirements—

"(A) liners (natural or manmade materials or both) or in situ soil, or combination of both, capable of preventing the migration of wastes or leachate out of the landfill to the aquifer or surface water during the active life of the facility;

"(B) leachate collection and removal systems installed immediately above the liner, which shall be sufficiently permeable to allow the leachate collection and removal system to function, and designed and constructed to maintain less than thirty centimeters of leachate head from the landfill during the active life and postclosure care period;

"(C) construction quality assurance plan specifying the materials to be used in liner construction, the construction techniques, the engineering plans, the installation test procedures, and a description of the methods to be used to modify work which does not meet project specifications; and

"(D) landfills shall not be located in the following locations—

"(i) within the one hundred-year flood plain unless it can be demonstrated by the owner or operator that engineering measures have been incorporated into the landfill design to ensure the landfill shall not restrict the flow of the one hundred-year base flood, reduce the temporary water shortage capacity of the floodplain, or result in the washout of solid waste so as to pose a hazard to human health or the environment;

"(ii) within a wetland except in accordance with section 301 of the Clean Water Act;

"(iii) within two hundred feet of a fault that has had displacement in Holocene time; and

"(iv) within a seismic impact zone and other unstable areas unless it can be demonstrated by the owner or operator that engineering measures have been incorporated into the landfill design to ensure the structural stability of the landfill capable of protecting human health and the environment.

"(c)(1) MUNICIPAL INCINERATOR ASH.—Regulations promulgated under subsection (a)(2) of this section for facilities in which municipal ash is disposed shall require at a minimum—

"(A) the installation of two or more liners and a leachate collection system above and between such liners, in accordance with paragraph (2) in this subsection; and

"(B) ground water monitoring.

"(2) The requirement of paragraph (1)(A) of this subsection may be satisfied by the installation of an upper liner under the waste designed, operated, and constructed of materials to prevent the migration of any constituent into such liner during the period such facility remains in operation (including any postclosure monitoring period), and a lower liner designed, operated, and constructed to prevent the migration of any constituent through such liner during such period. For the purpose of the preceding sentence, a lower liner shall be deemed to satisfy such requirement if it is constructed of at least a three-foot thick layer of recompacted clay or other natural material with a hydraulic conductivity of no more than 1×10^{-7} centimeter per second.

"(3) Notwithstanding the requirement of paragraph (1)(A), regulations promulgated under subsection (a)(2) may provide for the placement of ash from municipal waste incineration units in a monofill (containing only ash from such units) with a composite liner (including a synthetic liner constructed of high density polyethylene of sixty mil thickness or equivalent material and a lower liner in compliance with design requirements for lower liners under paragraph (2)), ground water monitoring and leachate collection. Requirements under this paragraph are minimum requirements and the Administrator shall promulgate more stringent requirements applicable where necessary to assure that releases from a monofill will not contaminate ground water or surface water or otherwise pose a threat of adverse effects on human health or the environment.

"(4) Regulations promulgated under subsection (a)(2) shall allow disposal of ash from municipal waste incineration units in sanitary landfills meeting the requirements of revised criteria promulgated under subsection (a)(1), if such has undergone treatment in accordance with regulations for such treatment promulgated under subsection (5) and such ash is tested and does not fail any criteria established under subsection (5). For purposes of this section, treatment means any method, technique, or process designed to change the physical, chemical, or biological character or composition of any ash so as to remove or fix in place any constituent of the ash which, in the event of mismanagement during transportation, storage, reuse or disposal, would pose a threat to human health or the environment. For the purposes of this section, the mixing of fly ash and bottom ash, or the mixing of such ash with other solid waste, without the introduction of chemical stabilization agents, does not constitute treatment.

"(5)(A) For the purposes of developing regulations for the management, handling, storage, treatment, transportation, reuse, and disposal of ash from municipal waste incineration units under this section that protect the Administrator shall promulgate criteria and testing procedures for identifying the characteristics of ash from municipal waste incineration units that may pose a hazard to human health or the environment. In considering potential hazards to human health and the environment, the Administrator shall consider all potential pathways of human or environmental exposure to constituents of such ash, including, but not limited to, inhalation, ingestion as a consequence of incorporation of the ash or any constituent into the food chain, ingestion of potable water or aquatic organisms contaminated by surface runoff, leaching or percolation of such ash or its constituents into groundwater or surface water, ingestion or inhalation of soil particles contaminated with such ash, and dermal contact with such ash (including, for all such pathways, situations of disposal or reuse). At a minimum, the Administrator shall consider appropriate methods to determine leaching, total chemical analysis, respirability, and toxicity. The criteria and accompanying testing procedures promulgated by the Administrator under this subsection shall reflect the heterogeneous characteristics of municipal solid waste and municipal incinerator ash, including seasonal variations in the constituents of such solid waste and ash. Leaching procedures established under this subsection shall include testing under acidic and native conditions. Test leachate from any ash containing a substance in concentrations exceeding the maximum contaminant level for such substance established pursuant to section 1412 of the Safe Drinking Water Act by a factor of one hundred or more shall constitute a failure of the test required by this section.

"(B) The Administrator may require the owner or operator of any municipal waste incineration unit or any facility handling, transporting, storing, treating, reusing, recycling, or disposing (pursuant to subsection (4) of ash from such unit to test such ash in accordance with the criteria and testing procedures promulgated under this subsection. If fly ash and bottom ash are combined, such combined ash must also be tested in accordance with such criteria and testing procedures.

"(C) Any ash which fails in any characteristic under the criteria and testing procedures promulgated by the Administrator under this subsection shall be disposed of in compliance with subsection (1), or shall be treated (as defined in section 1004(34)) in accordance with regulations promulgated under subsection (a) (2) and shall only be reused if such treated ash is determined to be nonhazardous as defined in section 3001.

"(6) Regulations promulgated under subsection (a)(2) shall require an enforceable schedule for corrective action for all releases of hazardous constituents from any solid waste management unit at a facility seeking a permit under section 4010, regardless of the time at which waste was placed in such unit.

"(7) Regulations promulgated under subsection (a)(2) shall establish requirements for the proper closure of facilities treating, storing, or disposing of ash from municipal waste incineration units, for the postclosure monitoring care of such facilities of not less than thirty years, and for assurances of financial responsibility for closure, postclosure care and corrective action.

"(d) MUNICIPAL INCINERATOR EMISSIONS.—(1) Regulations promulgated under subsection (a)(3) of this section shall require performance standards to control emissions of air pollutants into the ambient air from each municipal waste incineration unit which begins operation after January 1, 1989 or which is not substantially completed before such date. The standards promulgated under subsection (a)(3) shall reflect the greatest degree of emission limitation achievable through application of the best available control technologies and practices which the Administrator determines at the time of promulgation (or revision, in the case of a revision of a standard) has been achieved in practice by five or more municipal waste incineration units, excluding periods of malfunction or misoperation. In establishing standards under subsection (a)(3) the Administrator may distinguish between types and classes of municipal incineration units based on combustion technology or pollution control systems. In no event shall the standards promulgated under subsection (a)(3) permit such municipal waste incineration units to emit any pollutant in excess of the amount allowable under any applicable new source standards of performance. Standards shall be based on methods and technologies for removal or destruction of pollutants before, during, or after combustion, and shall incorporate siting requirements that minimize, on a site-specific basis, to the maximum extent practicable, any potential risk to human health or the environment. The following practices and control technologies, used individually, in combination with one another, or in combination with other available practices or control technologies not identified in this paragraph, shall be deemed available for purposes of this paragraph: electrostatic precipitators, fabric filtration, flue gas scrubbers, spray dry scrubbers, negative air flow, and good combustion practices, including availability of auxiliary fuel to maintain specific temperatures. In adopting standards of performance, the Administrator may take into consideration other technologies and practices that, either by themselves or in combination with other technologies or practices, may achieve a greater degree of emission reduction for the pollutants specified in paragraph (2), (A) including the use of selective or non-selective catalytic reduction, wet flue gas denitrification, selective non-catalytic reduction, wet scrubbing, or catalytic oxidation. The Administration may require new facilities to be constructed according to designs which allow for addition of selective catalytic reduction, and other technologies, as they become available, except that selective catalytic reduction may not be required at units which have installed active control technologies for control of emissions of oxides of nitrogen prior to the date of enactment of this section.

"(2)(A) The regulations promulgated under subsection (a)(3) shall specify numerical emission limitations for the following substances or mixtures: particulate matter (total and fine), opacity, sulfur dioxide, hydrogen chloride, oxides of nitrogen, carbon monoxide, lead, cadmium, mercury, halogenated organic compounds, dioxins, and dibenzofurans. In establishing such standards of performance the Administrator shall take into account the use of numerical standards or other methods to reduce the presence in air emissions or ash from a municipal waste incineration unit of each of the following additional substances: volatile organic compounds, beryllium, hydrogen fluoride, antimony, arsenic, barium, chromium, cobalt, copper, nickel, selenium, zinc, polychlorinated biphenyls, chlorobenzenes, chlorophenols, and polynuclear aromatic hydrocarbons.

"(B) The regulations promulgated under subsection (a)(3) may be expressed in terms of the postcombustion concentration of surrogate substances or periods of residence time in excess of stated temperatures. In no event shall any such standard allow an outlet gas carbon monoxide concentration greater than fifty parts per million on a four-hour average; an outlet gas particulate concentration greater than

0.010 grains per dry standard cubic foot corrected to 7 per centum oxygen, an outlet gas concentration of sulfur dioxide greater than forty parts per million on a three-hour average, unless uncontrolled emissions of sulfur dioxide are reduced by not less than 70 per centum; an outlet gas concentration of hydrogen chloride greater than thirty parts per million on a three-hour average, unless uncontrolled hydrogen chloride emissions are reduced by not less than 90 per centum; or a retention temperature and time of less than 1,800 degrees Fahrenheit or less than one second at fully mixed height (or the equivalent). Standards promulgated under subsection (a)(3) may allow an outlet gas carbon monoxide concentration greater than fifty parts per million during 1 per centum of the operating period in any month provided that such concentration shall not exceed one hundred parts per million averaged over four years. Compliance with particulate standards promulgated under this subsection (a)(3) may be demonstrated by an average concentration calculated on the basis of three tests taken at intervals scheduled by the permitting authority. The Administrator may establish standards for combustion parameters (including temperature) other than those stated in this paragraph for units employing atmospheric-fluidized bed boilers for the control of oxides of nitrogen, provided that such standards achieve a combustion efficiency equivalent to that required of other units.

"(3)(A) The regulations promulgated under subsection (a)(3) shall control emissions of air pollutants into the ambient air from each municipal waste incineration unit which is in operation or which is substantially completed prior to January 1, 1989. Such standards of performance shall be established on the basis of the degree of emission limitation achievable through application of available control technologies and practices as determined under subsection (a)(1), and shall specify emission limitations for the substances required under subsection (a)(2). In no event shall any such standard allow an outlet gas carbon monoxide concentration greater than one hundred parts per million on a four-hour average; an outlet gas particulate concentration greater than 0.020 grain per dry standard cubic foot corrected to 7 per centum oxygen; an outlet gas concentration of sulfur dioxide greater than sixty parts per million on a three-hour average, unless uncontrolled emissions of sulfur dioxide are reduced by 70 per centum; an outlet gas concentration of hydrogen chloride of forty-five parts per million on a three-hour average, unless uncontrolled emissions of hydrogen chloride are reduced by 90 per centum; or a retention temperature and time of less than 1,800 degrees Fahrenheit or less than one second at fully mixed height (or the equivalent). The Administrator is authorized to establish a standard allowing an outlet gas carbon monoxide concentration no greater than two hundred parts per million on an eight-hour average, for any municipal waste incineration unit in operation before January 1, 1989 that controls emissions of dioxins and dibenzofurans using acid gas scrubber and fabric filtration control technology. Standards imposed under subsection (a)(3) may allow an outlet gas carbon monoxide concentration greater than one hundred parts per million during 1 per centum of the operating period in any month provided that such concentration shall not exceed two hundred parts per million averaged over four hours. Compliance with particulate standards promulgated under subsection (a)(3) may be demonstrated by an average concentration calculated on the basis of three tests taken at intervals scheduled by the permitting authority.

"(B) The Administrator shall promulgate a schedule for compliance with the standards promulgated under subsection (a)(3). The schedule shall take into account the remaining useful life of the unit, the extent to which emissions from the unit threatens human health or the environment, and such other factors as the Administrator deems appropriate. In no event shall such schedule provide for compliance with such standards after a date—

"(i) eight years after the date of enactment, if the cost for the addition of required pollution control equipment will be more than 80 per centum of the unit's actual and projected capital cost absent such equipment,

"(ii) seven years after the date of enactment, if the cost for the addition of required pollution control equipment will be more than 40 per centum, but no greater than 80 per centum, of the unit's actual projected capital cost absent such equipment,

"(iii) six years after the date of enactment, if the cost for the addition of required pollution control equipment will be more than 20 per centum, but no greater than 40 per centum, of the unit's actual and projected capital cost absent such equipment, or

"(iv) five years after the date of enactment, if the cost for the addition of required pollution control equipment will be 20 per centum or less of the unit's actual and projected capital cost absent such equipment.

For purposes of this subsection, the term 'actual and projected capital cost' includes any actual expenditures and funds obligated to be spent pursuant to binding agreements or contractual obligations, which cannot be canceled or modified without substantial loss to the owner or operator of the unit, for the construction and installation of the unit (not including the cost of any land purchased in connection with construction or installation). Each owner or operator of an existing municipal incineration unit shall submit to the Administrator within twenty-four months after the promulgation of regulation under subsection (a)(3) a statement of the amount of such actual and projected capital costs of the unit and estimated costs of pollution control equipment. For each unit, the Administrator shall review and audit such estimates and actual and projected costs at two-year intervals following the twenty-four-month period and revise the schedule under this subsection accordingly, taking into account changed circumstances.

"(4) The regulations promulgated under subsection (a)(3) shall require the owner or operator of each municipal waste incineration unit (A) to monitor emissions from the unit at the point at which such emissions are emitted into the ambient air and at such other points as necessary to protect human health and the environment, (B) to monitor such other parameters relating to the operation of the unit and its pollution control technology as the Administrator determines are appropriate, and (C) to report the results of such monitoring. Such regulations shall contain provisions regarding the frequency of monitoring, test methods and procedures, and the form and frequency of reports containing the results of monitoring, and shall require that any monitoring reports or test results indicating exceedances of standards under this section shall be reported separately and in a manner that facilitates review for purposes of enforcement actions. Such regulations shall require that copies of the results of such monitoring be maintained on file at the facility concerned and that such copies shall be made available for inspection and copying by interested members of the public during business hours.

"(5)(A) Regulations promulgated under subsection (a)(3) shall, at a minimum, require continuous monitoring for the following: opacity, hydrogen chloride (if such monitoring device or method is available), sulfur dioxide, oxides of nitrogen, carbon monoxide, carbon dioxide, oxygen, stack temperature, and furnace temperature (or secondary combustion zone temperature, as appropriate).

"(B) For all emissions subject to standards under subsection (a)(3) that are not subject to continuous monitoring under subparagraph (A), the regulations promulgated under this subsection shall require periodic monitoring of such emissions at each municipal waste incineration unit not less frequently than—

"(i) every six months; or

"(ii) six months after commencement of operations, and every eighteen months thereafter if the owner or operator of such unit demonstrates that such unit has complied with all applicable emissions standards as of the commencement of operations and during the previous periods of monitoring and maintains compliance with all applicable emissions standards during each interval between monitoring.

"(C) The initial monitoring under this subsection shall commence at the later of the following—

"(i) the date six months after the promulgation of regulations under this subsection; or

"(ii) the commencement of operation of the unit concerned.

"(6)(A) Regulations required by subsection (a)(3) may require the owner or operator of each municipal waste incineration unit to establish and operate, or to pay the costs of establishing and operating, a program to detect impacts of the unit, or any associated releases, on the environment or human health. Such program shall require periodic testing for and public reporting of the presence of waste constituents or contaminants (or indicators thereof) at statistically significant levels.

"(B) In any case in which exposure to municipal waste incineration unit emissions or ash may pose a potential risk to human health, the Administrator or the State may request the Administrator of the Agency for Toxic Substances and Disease Registry to conduct a health assessment in connection with the unit and such other health studies or surveillance as may be warranted, as authorized under section 104(i) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980. Such studies may include programs to detect changes in the body burden of various pollutants including but not limited to lead, mercury, cadmium, halogenated hydrocarbons, and dioxins in any area affected by incineration unit emissions or ash.

"(e) INFECTIOUS WASTES.—(1) For the purpose of promulgating regulations under subsection (a)(3), infectious wastes shall include surgical, biological, isolation, laboratory and such other waste materials as the Administrator determines that because of their nature, presence, or contact may result in potential contamination with infectious agents.

"(2) Regulations promulgated under subsection (a)(3) for the storage and containment of infectious wastes shall require—

"(A) segregation of infectious waste from other wastes in leakproof containers labeled with a warning sign, and of sufficient strength to prevent ripping, tearing or bursting under normal conditions. Reusable containers for infectious waste shall be washed and decontaminated each time they are emptied;

"(B) such containers shall be stored no more than ninety days at the producing facility and shall be stored in a manner to deny access by unauthorized persons; or

"(C) trash chutes to transfer infectious waste between locations where it is stored are prohibited.

"(3) Regulations promulgated under subsection (a)(3) for the treatment and disposal of infectious wastes shall require—

"(A) infectious wastes to be handled separately until treatment or disposal is accomplished;

"(B) treatment or disposal of infectious wastes by one of the following methods—

"(i) incineration in a controlled-air multichambered incinerator which provides complete combustion of the waste to carbonized or mineralized ash and provides best available controlled technologies to control emissions; or

"(ii) sterilization by heating in a steam sterilizer, so as to render the waste noninfectious. Infectious wastes so rendered noninfectious, provided it is not a hazardous waste as defined in section 3001, and may be disposed in a permitted municipal landfill or discharged to a POTW if the waste is liquid or semiliquid, except as otherwise prohibited by State or local law or regulation.

"(4) Regulations promulgated under subsection (a)(3) for the transportation of infectious wastes shall require—

"(A) transportation of infectious waste in a leakproof, fully enclosed container within a vehicle compartment, and segregated from other wastes;

"(B) transportation by a registered hauler of infectious waste;

"(C) a manifest for accountability and tracking of infectious wastes from their point of generation to point of disposal at a permitted facility; and

"(D) a prohibition on the transportation of infectious wastes in a vehicle that will be used to transport food and food products.

"(f) MINING WASTES.—Regulations promulgated under subsection (a)(5) of this section shall apply to active and inactive mining operations and shall require the application of the best available control technology determined by the State (or the Administrator) on a site-specific basis to ensure protection of human health and the environment.

"(g) OIL AND GAS WASTES.—The regulations promulgated under subsection (a)(6) shall apply to all wastes from oil and gas exploration, development and production operations including associated wastes and shall require the application of the best available control technology as determined by the State (or the Administrator) to ensure protection of human health and the environment. The Administrator shall also require standards for bonding, plugging and abandonment of oil and gas wells.

"(h) INDUSTRIAL WASTES.—Except as provided in section 3005(j) (2), (3), or (4) each surface impoundment in existence on the date of enactment of this Act and qualifying for the authorization to operate under section 4010 of this Act shall not receive, store or treat solid waste after the date four years after such date of enactment unless such surface impoundment is in compliance with the requirements of section 3004(o)(1)(A) which would apply to such impoundments if it were new.

"(i) Until regulations are promulgated pursuant to section 4011(a) existing solid waste facilities shall submit information demonstrating that the facility is not releasing hazardous substances into the environment or is controlling such releases through corrective action as required by section 3004. Municipal solid waste landfills located in a statistical metropolitan area shall be required to make this demonstration using ground water monitoring within twelve months as a condition for a permit pursuant to section 4010(a). Municipal solid waste landfills located outside a statistical metropolitan area shall be required to submit to the State within twelve months, a schedule not to exceed twenty-four months for installing ground water monitoring.".

SEC. 205. FEDERAL ENFORCEMENT.

(a) Section 4012 is added to the Solid Waste Disposal Act to read as follows:

"(a) COMPLIANCE ORDERS.— (1) Except as provided in paragraph (2), whenever, on the basis of any information, the Administrator determines that any person has violated or is in violation of any requirement of this subtitle or of any permit issued by a State pursuant to authority certified under section 4010(b) or by the Administrator pursuant to section 4010(d), the Administrator may issue an order assessing a civil penalty for any past or current violation, requiring compliance immediately or within a specified time period, or both, or the Administrator may commence a civil action in the United States district court in the district in which the violation occurred for appropriate relief, including a temporary or permanent injunction.

"(2) In the case of a violation of any requirement of this subtitle, or of any permit, where such violation occurs in a State that has certified its authority under section 4010(b) to issue permits, the Administrator shall give notice to the State in which such violation has occurred and to the alleged violator at least sixty days prior to issuing an order or commencing a civil action under this section. The Administrator shall take no further action under this section with respect to the violation if, within sixty days of the Administrator's notice, the State has commenced and is prosecuting, or has prosecuted, an administrative, civil or criminal action before a duly authorized State agency or before a court of the United States or a State to require compliance with such requirement.

"(3) Any order issued pursuant to this subsection may include a suspension or revocation of any permit issued by the Administrator or a State under this subtitle and shall with reasonable specificity the nature of the violation. Any penalty assessed in the order shall not exceed $10,000 per day of noncompliance for each violation of a requirement of this subtitle. In assessing such a penalty, the Administrator shall take into account the seriousness of the violation and any good faith efforts to comply with applicable requirements.

"(b) PUBLIC HEARINGS.—Any order issued under this section shall become final unless, no later than thirty days after the order is served, the person or persons named therein request a public hearing. Upon such request the Administrator shall promptly conduct a public hearing. In connection with any proceeding under this section, the Administrator may issue subpoenas for the attendance and testimony of witnesses and the production of relevant papers, books and documents, and may promulgate rules for discovery procedures.

"(c) VIOLATION OF COMPLIANCE ORDERS.—If a violator fails to take corrective action within the time specified in a compliance order, the Administrator may assess a civil penalty of not more than $10,000 for each day of continued noncompliance with the order and the Administrator may suspend or revoke any permit issued to the violator (whether issued by the Administrator or the State).

"(d) CIVIL PENALTY.—Any person who violates any requirement of this subtitle or any permit issued pursuant to section 4010 shall be liable to the United States for a civil penalty in an amount not to exceed $10,000 for each such violation. Each day of violation shall, for purposes of this subsection, constitute a separate violation.

"(e) CRIMINAL PENALTY.—Any person who knowingly or willfully violates any requirement of this subtitle or any permit issued pursuant to section 4010 shall, in addition to or in lieu of any civil penalty which may be imposed under subsection (d) of this section for such violation, be subject, upon conviction, to a fine of not more than $10,000 for each day of violation, or to imprisonment for not more than one year, or both.".

SEC. 206. WASTE EXPORT.

(a) Section 4013 is added to the Solid Waste Disposal Act to read as follows:

"(a) PROHIBITION OF INTERNATIONAL WASTE SHIPMENTS.—Effective on enactment of this Act no person shall export any solid waste (including hazardous waste defined in

Section 3001) for the purpose of disposal, storage or incineration, unless the United States and the government of the receiving country have entered into an agreement as provided for in subsection (b) and the shipment conforms with the terms of such agreement. This prohibition shall not apply to material exported for recycling identified under United States tariff codes as secondary recovery materials.

"(b) INTERNATIONAL AGREEMENTS.—The United States and the government of the receiving country may enter into an agreement that establishes notice, export, and enforcement procedures and standards protective of human health and the environment for the transportation, treatment, storage, and disposal of solid wastes as defined by section 3001 of the Solid Waste Disposal Act. Any international agreement pursuant to which solid waste may be exported from the United States shall include, at a minimum—

"(1) a provision for the notification of shipments of wastes;

"(2) a provision for obtaining the consent of the receiving country to accept any waste shipment and a certification from the receiving country that any such shipment meets the terms of the agreement;

"(3) a provision on information exchange on the manner in which the wastes will be managed in the receiving country, including mechanisms to provide the

United States with the information necessary to ensure that transportation, treatment, storage and disposal of any waste shipment will be conducted in accordance with standards protective of human health and the environment; and

"(4) a provision for periodic review of the effectiveness of the agreement.

"(c) REGISTRATION OF EXPORTERS.—

"(1) REQUIREMENT.—No person may export solid waste unless he exports the waste in compliance with the terms of the international agreement, unless he has registered with the Administrator as an exporter of solid waste, and unless the information filed as specified in subsection (c)(2), including any amendments thereto, is accurate as of the time that the export is made.

"(2) FILING.—Any registration filed under this section shall contain the information specified below. The Administrator may augment or further define by regulation as he deems appropriate—

"(i) the name and address of the exporter;

"(ii) the composition, quantities, and concentrations of wastes to be exported to any foreign country;

"(iii) the names and addresses of any persons on whose behalf the applicant intends to export waste (including persons who are the generators of such waste);

"(iv) the estimated frequency or rate at which such waste is to be exported and the period of time over which such waste is to be exported;

"(v) the ports of entry; and

"(vi) the name and address of the ultimate treatment, storage or disposal facility or facilities and the manner in which such waste will be transported, treated, stored and disposed.

"(d) REPORT.—Any person who registers for export of solid waste under subsection (c) of this section shall file with the Administrator no later than March 1 of each year, a report which summarizes exports of solid waste undertaken pursuant to such registration; the information reported shall address each of the items for registration set forth in subsection (c)(2) of this section. No later than September 30, 1989, and annually thereafter, the Administrator shall provide Congress with a report summarizing the information contained in the reports filed by registrants pursuant to this subsection.".

SEC. 207. FEDERAL ASSISTANCE.

(a) Section 4008(a) of the Solid Waste Disposal Act is amended by adding after "$10,000 for each of the fiscal years 1985 through 1988" the following "$400,000,000 in funds available from the 'Waste Minimization Revenue Act of 1988', for each of the fiscal years 1989 through 1993,"

(b) Section 4008(2)(A) of the Solid Waste Disposal Act is amended by deleting "and fiscal or economic investigations or studies" and inserting "installation and operation of monitoring devices, and fiscal or economic investigations or studies".

(c) Section 4008(C) of the Solid Waste Disposal Act is amended by deleting "$10,000,000 for fiscal year 1982, and $10,000,000 for each year of the fiscal years 1985 through 1988" and inserting "$10,000,000 for fiscal year 1982 through 1988 and $400,000,000 in funds available from the 'Waste Minimization Revenue Act of 1988', for each of the fiscal years 1989 through 1991".

SEC. 208. RURAL COMMUNITIES ASSISTANCE.

(a) Section 4009(a) of the Solid Waste Disposal Act is amended by inserting after "The Administrator shall make grants to States to provide assistance" the following "including grants for the installation and operations of monitoring devices".

(b) Section 4009(d) of the Solid Waste Disposal Act is amended by deleting "and $15,000,000 for each of the fiscal years 1981 and 1982 to carry out this section." and insert the following, ", $15,000,000 for each of the fiscal years

1981 and 1982, and $100,000,000 from the 'Waste Minimization Revenue Act of 1988' for each of the fiscal years 1989 through 1991 to carry out this section.".

TITLE III—WASTE REDUCTION AND RECYCLING ACT OF 1988

SEC. 301. WASTE REDUCTION AND RECYCLING GOALS.

(a) Section 5001 of the Solid Waste Disposal Act is amended to read as follows:

"(a) WASTE REDUCTION AND RECYCLING GOALS.—The Administrator shall—

"(1) establish a national performance efficiency standard for industrial waste generators in SIC's 20–39, requiring within ten years that total hazardous residuals including emissions, effluents, spills and managed wastes will not exceed 5 per centum of production throughput;

"(2) establish a national goal of 25 per centum municipal solid waste recycling within four years, 50 per centum within ten years where recycling constitutes least cost disposal, and 10 per centum municipal solid waste reduction within four years;

"(3) establish responsibility for waste reduction and recycling within the Environmental Protection Agency to provide outreach and technical assistance to the industrial community and States on waste reduction and recycling methods and opportunities, and to the educational community to promote the introduction of waste reduction and recycling principles into engineering and management curricula;

"(4) ensure that the Environmental Protection Agency's existing and proposed programs, policies, regulations and guidelines are consistent with these waste reduction and recycling goals, by requiring the responsible office for waste reduction and recycling activities to review and sign-off on such agency actions; and

"(5) establish a national packaging institute to develop voluntary packaging standards to encourage waste reduction and recycling.".

SEC. 302. OFFICE OF WASTE MINIMIZATION.

Section 5002 of the Solid Waste Disposal Act is amended to read as follows:

"(a) AUTHORITY.—The Administrator shall establish within the Office of the Administrator a multimedia Office of Waste Minimization with a separate section solely responsible for waste reduction activities.

"(b) FUNCTIONS.—The Administrator is authorized to carry out the provisions of this Act to include specifically the following functions—

"(1) assist States and industry in implementing the goals established in section 5001 as amended by this Act;

"(2) administer the waste reduction and recycling grants established under section 5003 as amended by this Act;

"(3) administer the waste reduction and recycling clearinghouse established under section 5004 as amended by this Act;

"(4) collect annual waste reduction and recycling information established under section 5007 as amended by this Act;

"(5) prepare and submit reporting on waste reduction and recycling established under section 5006 as amended by this Act;

"(6) coordinate with the Packaging Institute to carry out functions required under section 5007 as amended by this Act;

"(7) coordinate with the Federal waste reduction officers required under section 5008 of this Act;

"(8) promulgate Federal procurement guidelines required under section subtitle F as amended by this Act; and

"(9) coordinate with the Secretary of Commerce to carry out functions required under sections 5011 to

5016 of the Waste Reduction and Control Act of 1988.".

SEC. 303. GRANTS TO STATES FOR TECHNICAL ASSISTANCE PROGRAMS.

Section 5003 of the Solid Waste Disposal Act is amended to read:

"(a) General Authority.—Upon application of a State and from funds available from the waste disposal fund pursuant to section 4008 and section 4009, the Administrator shall make grants, subject to such terms and conditions as the Administrator considers appropriate, under this section to such State for the purpose of assisting the State in developing and implementing a program to promote the use of waste reduction and recycling techniques by businesses, local governments or regional waste management authorities.

"(b) Applications.—An application for a grant under this section in any fiscal year shall be in such form and shall contain such other information as the Administrator may require.

"(c) Federal Share.—The Federal share of the cost of assisting a State in carrying out waste reduction and recycling activities in any fiscal year under this section shall be no more than 50 per centum of the funds made available to a State in each year of that State's participation in the program.

"(d) CRITERIA.—For each fiscal year beginning after September 30, 1989, the Administrator shall give consideration in determining the Federal share of any such grant, to States which have implemented or are proposing to implement waste reduction and recycling programs which will provide—

"(1) specific technical assistance to businesses and communities seeking information about waste reduction and recycling opportunities, including funding for experts to provide on-site technical advice to businesses and communities seeking assistance;

"(2) assistance to businesses and communities for whom lack of information is an impediment to waste reduction and recycling; and

"(3) training on waste reduction and recycling techniques, through local educational institutions and other appropriate programs.

"(d) EFFECTIVENESS.—The Administrator shall establish appropriate means for measuring the effectiveness of the State grants made under this section in promoting the use of waste reduction and recycling techniques.

"(e) SATISFACTORY PROGRESS.—No grant may be made under this section in any fiscal year to a State which in the preceding fiscal year received a grant under this section unless the Administrator determines that such State made satisfactory progress in promoting the use of waste reduction and recycling techniques.

"(f) REQUEST FOR INFORMATION.—The Administrator may request such information, data, and reports as he considers necessary to make the determination of continuing eligibility for grants under this section.

"(g) REPORTING.—Each State shall report to the Administrator on the progress in promoting waste reduction and recycling techniques and shall make other information generated under the grants available to the Administrator.".

SEC. 304. WASTE REDUCTION AND RECYCLING CLEARINGHOUSE.

Section 5004 of the Solid Waste Disposal Act is amended to read:

"(a) AUTHORITY.—The Administrator shall establish a waste reduction clearinghouse to compile information generated by grant recipient States on management, technical, and operational approaches to waste reduction and recycling. The clearinghouse shall—

"(1) serve as a center for waste reduction and recycling technology transfer;

"(2) encourage active State outreach and education programs to further the adoption of waste reduction and recycling technologies; and

"(3) collect, compile, evaluate, and disseminate information reported by States receiving grants under section 4 on waste reduction and recycling techniques and effectiveness.

"(b) PUBLIC AVAILABILITY.—The Administrator shall make available to the public such information on waste reduction as is developed pursuant to this Act and other pertinent information and analysis regarding waste reduction on a cost reimbursable basis. The Administrator shall determine feasible methods, including the use of computers, to make such information available in a manner compatible with other information maintained by the EPA relevant to waste reduction and recycling.".

SEC. 305. HAZARDOUS SUBSTANCES EFFICIENCY STANDARD.

(a) Section 5005 of the Solid Waste Disposal Act is amended to read as follows:

"(a) EFFICIENCY STANDARD.—(1) Except as provided in this section, effective one hundred and twenty months after the enactment of this section, the release to the environment of more than 5 per centum of production throughput of hazardous substances by any person required to file a toxic chemical release form under section 313 of the Superfund Amendments and Reauthorization Act of 1986 shall be unlawful.

"(2) The Administrator shall, within thirty-six months of enactment of this Act and after notice and opportunity for public hearing, promulgate regulations specifying the manner in which any manufacturer subject to this provision shall calculate the production throughput of hazardous substances for the purpose of establishing a basis for the required percentage determination. Such regulations may distinguish among manufacturing processes and categories and among products produced.

"(3) The Administrator or a State authorized pursuant to section 3006 or a State with the permit program under section 4010 may waive this standard on a plant by plant basis if a determination is made that such a standard is technically infeasible; that such plant is in compliance with paragraph (b) of this subsection; that all available minimization procedures have been adopted; and that all releases from such plant are in the form of permitted managed waste or in compliance with an applicable clean air or clean water permit.

"(4) Effective forty-eight months after the date of enactment of this section, each owner or operator shall submit to the State or Administrator, a plan to quantify and report to on the manner in which each hazardous substance subject to this provision is consumed, used and/or released. Unless disapproved within nine months after the date required for submittal, such plan shall be implemented by such person.

"(5) Not later than one year after the date on which such plans have been submitted, the Administrator shall report to the Congress on waste efficiency rates by manufacturing category or process and shall estimate the efficiency levels that each industry can reasonably be expected to achieve within five years and the extent to which technical assistance may be needed. The Administrator shall include in such report any legislative recommendations to expand the scope and effectiveness of the waste efficiency program.

"(6) Any manufacturer subject to the provisions of this subsection which shall have installed, prior to the time required in paragraph (4), continuous emission and environmental monitoring equipment capable of detecting losses to the environment through spills, leaks, discharges, dumps, releases, or emissions of substances for which toxic chemical release forms are required under section 313 of Superfund Amendments and Reauthorization Act of 1986 shall be deemed in compliance with this provision so long as such manufacturer continues in compliance with all applicable environmental permits and makes available data from such monitoring to the appropriate local, State, and Federal regulatory agencies pursuant to section 313 of the Superfund Amendments and Reauthorization Act of 1986.

"(b)(1) CONTINUOUS MONITORING.—Any person required to file an annual toxic chemical release form under section 313 of the Superfund Amendments and Reauthorization Act of 1986 who is unable to account for any section 313 substances as product or permitted discharge or emissions or as managed wastes shall within one year of such failure install, operate, and maintain continuous monitoring technology capable of detecting and reporting all emissions or discharges in excess of those set forth in permits or, in the case of section 313 substances not subject to permits, in excess of threshold limit values. Failure to comply with this requirement shall be enforceable as a knowing violation pursuant to section 4012(e). Information gathered pursuant to this section shall be submitted with toxic release forms required by section 313 to the appropriate official designated pursuant to section 313(a); such records shall be made available to State or Federal enforcement agencies and to the public at reasonable times for inspection.

"(2) Any person required to file an annual toxic chemical release form under section 313 of the Superfund Amendments and Reauthorization Act of 1986 who spills, leaks, or dumps such toxic chemicals or has an emission or discharge of such toxic chemical in violation of any Clean Air, NPDES, or waste management permit shall as a part of any enforcement action pursuant to Federal or State law be required to install, operate, and maintain continuous monitoring technology capable of detecting and reporting any emissions or discharges in excess of those allowed by law, regulation, or in the absence of specific requirements, threshold limit values for such substances.".

SEC. 306. EPA REPORT.

(a) Section 5006 of the Solid Waste Disposal Act is amended to read as follows:

"(a) EPA BIENNIAL REPORT.—The Administrator shall provide Congress with a report by September 30, 1989, and biennially thereafter, containing a detailed description of the actions taken to implement the strategy to promote waste reduction developed under section 302 and the results of such actions. The report shall include an assessment of the effectiveness of the programs established under this Act in promoting the goals of the strategy and shall include in the report recommendations to make the program more effective.

"(b) Not later than twenty-four months after the enactment of this section, the Administrator shall prepare a report to the Senate Environment and Public Works Committee and the House Energy and Commerce Committee on the EPA's program to insure the consideration of multi-media impacts in EPA policies, regulations and guidance, with recommendations for a permanent location of an office of waste reduction and recycling.

"(c) The Administrator shall conduct a waste reduction capability study to evaluate the capability of industry to reduce waste volume and toxicity taking into account technical, environmental and economic feasibility by industry sector. The study shall include recommendations for modifying the efficiency standard. The Administrator shall submit this study to Congress no later than thirty-six months after the date of enactment of this Act.".

SEC. 307. NATIONAL PACKAGING INSTITUTE.

(a) Section 5007 of the Solid Waste Disposal Act is added to read as follows:

"(a) IN GENERAL.—The Administrator is authorized to charter a national organization on product packaging standards and practices. The organization shall be called the National Packaging Institute. The institute shall be incorporated in the District of Columbia and shall have a board of directors of not less than eleven members which shall be representative of the interests of industries manufacturing packaging materials and industries and commercial concerns which are major users of packaging materials. The board may also include representatives of the public interest, persons with expertise in solid waste management, and elected or appointed officials of State and local governments. The Administrator shall grant (or deny) a charter on the basis of a prospectus or other proposal from a prospective board of directors.

"(b) PURPOSE OF THE INSTITUTE.—It shall be the purpose of the institute to encourage and promote the use of packaging which, with due regard for the cost and convenience of consumer products, will—

"(1) minimize the quantity of packaging material which enters the Nation's solid waste management system;

"(2) minimize the consumption of scarce natural resources;

"(3) maximize the recycling and reuse of packaging materials;

"(4) reduce litter; and

"(5) assure that human health and the environment (including impacts on wildlife from improper disposal of nondegradable packaging materials) will not be adversely affected as the result of the use or disposal of such packaging materials.

"(c) POWERS OF THE INSTITUTE AND BOARD.—

"(1) The institute shall have power to receive, purchase, hold, sell and convey real and personal property; to sue and be sued, complain and defend in courts of law and equity within the jurisdiction of the United States; to make, adopt and amend a constitution, bylaws, rules, and regulations for the conduct of its business; and to provide for the election of its officers and to define their duties: *Provided*, That such constitution, bylaws, rules, and regulations are not inconsistent with the provisions of this section or any other law of the United States or of any States thereof.

"(2) All powers necessary to govern, direct and manage the institute, including the power to—

"(A) establish packaging standards,

"(B) design and license the use of a seal or symbol,

"(C) appoint and replace members of the board, and

"(D) hire personnel, enter into contracts and otherwise conduct all business necessary and appropriate to carry out the purposes of the institute, shall be vested in the board of directors.

"(d) PACKAGING STANDARDS.—The institute shall establish national packaging standards which address the design, composition, volume, reuse, recyclability, degradability and disposal of product packages and packaging materials used in consumer products which shall further the purposes of subsection (b) when implemented on a voluntary basis by entities in the packaging industry and other commerce.

"(e) USE OF THE SEAL.—

"(1) The institute is authorized to design and license the use of a seal or symbol which may be employed by any licensed user or users on packages which satisfy the standards established under subsection (e). Any person may apply to the institute for a license to use the seal or symbol on a package of a particular type and shall submit with such application all evidence necessary to demonstrate that the package type on which the seal or symbol will be used meets such standards.

"(2) The institute is authorized to charge a fee for licensing the seal or symbol and may use the revenues from such fee to offset the costs of operating the institute.

"(3) The Administrator is authorized to conduct a program of public information and education, including a program of public service advertising, to encourage consumer understanding of the impact of packaging on natural resource consumption and the Nation's solid waste management system, the purposes of the institute, and the benefits which may be achieved by implementing the packaging standards which have been established by the institute in purchasing decisions of individual consumers.

"(f) CRITERIA FOR GRANTING CHARTER.—In deciding whether to grant or extend a charter under this section, the Administrator shall take into account any information with respect to the following criteria as evidenced in the prospectus prepared and presented by the prospective board of the institute:

"(1) the ability of the board to work with the packaging industry and its commercial clients to assure implementation of the standards established under subsection (e) to the fullest extent practicable;

"(2) the expertise available to the board in solid waste management practices and the measures necessary to protect public health and the environment from any adverse effects which may result from such practices;

"(3) financial support for the programs of the board committed to the board or through its affiliate organizations to carry out the programs of the institute; and

"(4) the ability of the board to promote public understanding of the institute's purposes and application of the packaging standards established by the institute.

"(g) PUBLIC PARTICIPATION.—The board shall conduct its business in open meetings (subject to the requirements for privacy in personnel matters and review of confidential business information) and shall, to the maximum extent practicable, seek public comment and participation in the development of its programs.

"(h) RENEWAL OF CHARTER.—The initial charter of the National Packaging Institute shall extend for a period of not more than four years with an option for continuous renewal at seven-year intervals thereafter. The Administrator may establish a term of shorter duration or may grant a charter on specified conditions of performance, if it is necessary and appropriate to secure the purposes of this section.

"(i) UNLAWFUL ACT.—It shall be unlawful for any person to use the seal or symbol of the institute unless explicitly licensed to do so. Any person violating the provisions of this subsection shall be subject to civil penalty of not more than $10,000 per violation which shall be imposed by the district court of the United States for the district in which such person does business or in which a package bearing such seal or symbol is distributed in commerce.

"(j) AUTHORIZATION.—

"(1) The Administrator is authorized to make grants to the institute in an amount not to exceed $1,000,000 in any fiscal year.

"(2) There is authorized to be appropriated $2,500,000 in the fiscal year ending September 30, 1989 and $1,000,000 in each succeeding fiscal year through September 30, 1993 to carry out the purposes of subsection (f)(3) and $1,000,000 in each fiscal year ending prior to October 1, 1993 to carry out the provisions of paragraph (1) of this subsection.".

SEC. 308. FEDERAL AGENCY ACTIONS.

(a) Section 5008 of the Solid Waste Disposal Act is added to read as follows:

"(a)(i) WASTE REDUCTION PETITION.—Any person may petition a Federal agency to undertake a waste reduction action, and such action shall be undertaken by the agency if—

"(1) undertaking the action which is the subject of the petition would bring about at least a 10 per centum increase in recycled content of an item described in the petition or would reduce by at least 10 per centum the total volume or toxic constituents of a solid waste described in the petition;

"(2) undertaking the petitioned action would be consistent with existing law or, if not consistent with agency regulations or policy, that such regulations or policies can be modified to accommodate the petitioned act and remain in accordance with statutory requirements; and

"(3) undertaking the petitioned action would bring about a net saving in true cost to the Federal Government or would be neutral in effect or cost.

"(4) for purposes of this subsection (a), a waste reduction action includes any action with this effect that is authorized, funded or carried out by a Federal agency.

"(ii)(1) PETITION NOTIFICATION.—Within ninety days after receipt of a petition, the Federal agency shall notify the petitioner whether the petition presents substantial evidence warranting review. If the agency finds that the petition does not present such evidence, it would be required to notify the petitioner.

"(2) If the agency finds that the petition presents substantial evidence in respect to the requirements of (a)(i), the agency shall notify the petitioner of the finding and conduct a review based upon the information in the petition and any other information available to the agency. No later than twelve months of the finding of substantial evidence, the agency shall deny the petition or grant the petition in whole or in part and explain the steps that will be taken to implement any parts of the petition that are granted. If the agency denies the petition, the agency shall notify the petitioner and shall explain in writing the basis for concluding that the requirements of subsection (a)(i) are not met.

"(b) FEDERAL WASTE REDUCTION OFFICER.—Each Federal agency shall designate a waste reduction officer to oversee compliance with Federal agency waste reduction requirements of this Act. Each Federal agency shall provide EPA with the name, title, address, and phone number of its waste reduction officer. Waste reduction officers shall prepare agency waste reduction plans and shall report annually to EPA on implementation of the plans including estimates of any cost-savings achieved through waste reduction.".

SEC. 309. FEDERAL CONTRACTS.

(a) Section 5009 of the Solid Waste Disposal Act is added to read as follows:

"(a) FEDERAL CONTRACTS.—Any Federal agency which contracts with any private party or other Federal agency shall, with respect to any contract for $1,000,000 or more, require such contractor to use recycled materials in performance of the contract. Such agency shall, in consultation with EPA and pursuant to EPA guidelines on recycled materials required under section 6005, include in specifications for such contract those aspects of contract performance which can be fulfilled with recycled materials. No requirement to use recycled materials may be imposed when the contractor certifies the material is not available or not available at a cost of not more than 10 per centum more than nonrecycled materials.".

SEC. 310. HAZARDOUS CONSTITUENTS IN PRODUCTS.

(a) Section 5010 of the Solid Waste Disposal Act is added to read as follows:

"(a) INFORMATION COLLECTION ON HAZARDOUS CONSTITUENTS IN PRODUCTS.—The Administrator shall determine the extent to which hazardous substances in section 101(14) of the Superfund Amendments and Reauthorization Act of 1986 are contained in products distributed in commerce. Not later than one year after enactment of this Act, the Administrator shall publish and submit to Congress a list of no less than ten products, which identifies hazardous substances most frequently found in such products which present a risk to human health and the environment when incinerated or disposed of. The Administrator shall update this list with no less than ten new products each year, and publish and submit to Congress a revised list on an annual basis.

"(b) STANDARDS FOR DISPOSAL OF HAZARDOUS CONSTITUENTS IN PRODUCTS.—The Administrator is authorized to promulgate regulations for the disposal or incineration of products containing hazardous substances listed under subsection (a) as may be necessary to protect human health and the environment from risks of disposal or incineration of such products.

"(c) Not later than six months after date of submission of the information required in subsection (a) the Administrator shall determine whether to promulgate regulations under subsection (b). If the Administrator determines that regulation under subsection (b) will not adequately protect human health and the environment, he shall establish a schedule not to exceed twenty-four months for review pursuant to section 6 of the Toxic Substances Control Act to regulate the products in which the hazardous substances are contained.

"(d) Effective twelve months after the date of enactment of this section, the land disposal and incineration of lead-acid batteries and mercury batteries is prohibited. Effective twelve months after date of enactment of this section land disposal of unshredded tires is prohibited.

"(e) Not later than twelve months after the date of enactment of this section, the Administrator shall promulgate performance standards and other requirements as may be necessary to protect the public health and the environment from hazards associated with recycled lead-acid batteries and recycled mercury batteries. In development of such regulations, the Administrator shall conduct an analysis of the economic impact of the regulations on the lead-acid battery and mercury battery recycling industry. The Administrator shall ensure that such regulations do not discourage the recovery or recycling of lead-acid and mercury batteries consistent with protection of human health and the environment.

"(f) No person may recover, under the authority of subsection (a)(3) or (a)(4) of section 107 of the Superfund Amendments and Reauthorization Act of 1986, from a lead-acid battery or mercury battery recycler for any response costs or damages resulting from a release or threatened release of recycled lead-acid batteries or mercury batteries, or use the authority of section 106 of the Superfund Amendments and Reauthorization Act of 1986, from a lead-acid battery or mercury battery recycler other than a person described in subsection (a)(1) or (a)(2) of section 107 of the Superfund Amendments and Reauthorization Act of 1986, if such recycled batteries—

"(A) is not mixed with any other hazardous substance, and

"(B) is stored, treated, transported, or otherwise managed in compliance with regulations or standards promulgated pursuant to subsection (g) of this section.

Nothing in this paragraph shall affect or modify in any way the obligations or liability of any person under any other provision of State or Federal law, including common law for damages, injury, or loss resulting from a release or threatened release of any hazardous substance or for removal or remedial action or the costs of removal or remedial action.".

SEC. 311. FEDERAL PROCUREMENT.

(a) Section 6002(a) subsection (c)(1)(C) of subtitle F of RCRA is amended as follows: "(C) are only available at an unreasonable price. A price is unreasonable if it exceeds by more than 10 percent the price of alternative items. Any determination under subparagraph (B) shall be made on the basis of the guidelines of the Bureau of Standards in any case in which such material is covered by such guidelines.".

(b) A new subsection 6005 is added to read as follows—

"(a) SPECIFIED EPA GUIDELINES.—Within twelve months after enactment of this Act, the Administrator shall reissue its paper procurement guidelines to ensure that they are consistent with the requirement of section 6002(c)(1)(C). The Administrator shall also promulgate final procurement guidelines requiring the use of—

"(1) recycled lead in lead-acid batteries;

"(2) used tire fragments in road cover;

"(3) compost from yard waste and sewage sludge;

"(4) recycled plastic from discarded bottles;

"(5) recycled steel from discarded cans;

"(6) recycled glass from discarded containers; and

"(7) recycled aluminum from discarded cans;

Such final guidelines shall be promulgated no later than the dates after enactment of this Act which are at the close of the following periods: (1) twelve months, (2) sixteen months, (3) twenty months, (4) twenty-four months, (5) twenty-eight months, (6) thirty-two months, (7) thirty-six months.

"(b) If EPA fails to issue a procurement guideline specified in subsection (a) within the time specified, federal agencies shall not authorize, fund, or carry out any action except in accordance with the conditions below insofar as they pertain to that guideline—

"(1) any lead-acid batteries purchased shall contain a minimum of 50 per centum recycled lead;

"(2) at least 50 per centum of road cover applications shall incorporate used tire fragments;

"(3) any paper, plastics, steel, glass or aluminum purchased shall contain a minimum of 50 per centum recycled content, unless such items are not available at a reasonable cost and of adequate quality;

"(4) compost shall be used in lieu of alternative materials for plant nutrition, cover or fill on public land and interstate highways unless not available or capable of serving the purpose intended.".

SEC. 312. DUTIES OF THE SECRETARY OF COMMERCE IN RESOURCE RECOVERY.

(a) Sections 5001 to 5006 are redesignated as sections 5011 to 5016.

WASTE MINIMIZATION AND CONTROL ACT OF 1988

MONDAY, SEPTEMBER 26, 1988

U.S. Senate,
Committee on Environment and Public Works,
Subcommittee on Hazardous Waste and
Toxic Substances,
Washington, DC.

The subcommittee met, pursuant to recess, at 10:08 a.m., in room 406, Dirksen Senate Office Building, Hon. Max Baucus (chairman of the subcommittee) presiding.

Present: Senator Baucus.

OPENING STATEMENT OF HON. MAX BAUCUS, U.S. SENATOR FROM THE STATE OF MONTANA

Senator Baucus. The hearing will come to order.

Last Thursday we heard waste managers and recyclers from various cities and States about our solid waste problems—capacity shortfalls, the reckless management of medical wastes, and our nation's "use and toss" mentality. Our experts also told us that unless we minimize our waste by reducing or recycling more, we will face serious problems in the years to come.

But what struck me most was the recurring theme from all of our experts that while solid waste has, is, and will continue to be a State and local issue—as one city council member put it—"The Federal Government is essential if we are to have a positive effect on how we deal with municipal solid waste."

I am convinced that much of our current solid waste problems—and there are many—exist because for too long States and cities have had to fend for themselves. The solid waste problem—to quote from another witness—

> Is a regional one at the moment, but is growing daily and without a doubt will assume national proportions in the next decade absent a Federal initiative. The growing capacity shortage represents a failure of government at the State and local level that Congress must move aggressively to remedy.

The RCRA reauthorization bill that I introduced along with Senator Durenberger two weeks ago is a first step in finding sound methods to address our solid waste. It will set, for the first time, waste minimization standards. It will set minimum standards for managing the wastes that we generate, and it will provide the needed resources to States to help them implement the policy. We Americans must begin to tackle the waste problems. And while we must do it quickly, we must be smart and examine all of the options.

Last Thursday I posed several questions to our witnesses. Today I will again ask our witnesses for their views on the best ways to protect our citizens and the environment from the hazards of solid waste. Are there viable alternatives that will achieve similar or better environmental results than those set forth in this bill? Are there enforcement alternatives or other mechanisms that will help ensure compliance with the legislation? What alternative permanent financing mechanisms are available to support the legislation? And how can we avoid reliving the past eight years of EPA's failure to act, and to ensure that mandatory and permissive authority in the legislation will be implemented?

I thank our witnesses for coming today. I know that some of you travelled some distance at some effort, and I appreciate you taking the time and effort to come to express your views before us today.

Our first panel consists of Jane Bloom of the Natural Resources Defense Council, accompanied by Ned Smith, also of NRDC; Dr. Nelson Slavik from the American Hospital Association; Jim Petros of the Chemical Manufacturers Association; and Marcia Williams from Browning Ferris Industries.

Ms. Bloom, would you begin?

STATEMENT OF JANE BLOOM, NATURAL RESOURCES DEFENSE COUNCIL, ACCOMPANIED BY NED SMITH, CHEMICAL ENGINEER

Ms. BLOOM. Thank you, Mr. Chairman. I am a lawyer with the Natural Resources Defense Council, and with me today is Ned Smith, a chemical engineer on the staff of NRDC.

First let me thank you for inviting us to testify before you today. NRDC supports the committee's efforts and your leadership in initiating a major overhaul of the solid waste and waste reduction programs of RCRA.

S. 2773 addresses many of the major gaps in RCRA that were not dealt with in the 1984 amendments. Of particular importance, it would require national standards to be set for facilities managing subtitle D wastes, which until this time have been largely subject to inadequate or widely varying State and local regulations. The result of this piece-meal approach, in our view, has been widespread ground water contamination and in many cases air pollution from thousands of municipal landfills and incinerators and from hundreds of thousands of surface impoundments and other facilities that are managing a variety of industrial Subtitle D wastes.

We think that S. 2773 will help to close this loophole, and of great importance, the bill includes innovative provisions that would mandate hazardous and solid waste reduction and could achieve dramatic and badly needed reductions in the amount of solid waste that is disposed of into land, water, and air. Waste reduction is a major part of the solution to our solid and hazardous waste crisis, and we believe that S. 2773 goes further toward the establishment of a comprehensive national waste reduction program than any other legislation that has been proposed to date.

I would like to briefly summarize NRDC's testimony, which is quite lengthy, by focusing on two of the major issues that are addressed by your bill: hazardous waste reduction and the standards for solid waste facilities. We commend you for introducing legislation that will actually require waste generators to reduce their waste via source reduction, and as we understand the bill, by recycling as well.

Based on our experience with other environmental programs, we believe that national standards are needed if we are actually to achieve dramatic reductions in waste generation. Despite claims that waste reduction is occurring voluntarily, a huge volume of hazardous and toxic waste is still being generated and disposed of each year and does not appear to be declining very much, if at all.

We think that Congress needs to tell waste generators where it wants them to go by establishing minimum requirements for waste reduction, and we think that there is enough information already available to let us set an initial goal for waste generators to meet. We are therefore very pleased that a key element of the bill is the establishment of a mandatory waste reduction performance standard. This would require all generators within the manufacturing sector to achieve a specified level of efficiency in their use of toxic chemicals and thereby reduce the amount of hazardous substances that they release to air, land, and water.

Efficiency is a concept that fits very nicely into waste generation because waste is essentially an inefficiency in manufacturing processes. Setting an efficiency standard that will apply to all industries makes a lot of sense to us. Based on NRDC's research, we believe that a five percent standard, which is required by the bill, could achieve up to 65 percent reduction in the amount of hazardous substances that are released to the environment after 10 years.

This is equivalent to the amount of reduction that OTA believes is achievable in the next five years, extrapolated over a 10-year period. We think that it is interesting to note that EPA's effluent limitations guidelines, which were done on an industry-by-industry basis over a period of 15 years and are still not completed, arrived at a comparable level of reduction for most of the industries that have been addressed so far.

NRDC has researched the current efficiency levels that manufacturers are achieving using data collected under New Jersey's Industrial Survey and Right-To-Know programs, and we have concluded that a five percent standard is achievable right now by many waste generators—in fact, by approximately 60 percent of chemical uses that were studied. And we also believe that it would certainly be achievable by most of the generators in 10 years.

We do not think that this is an unduly stringent standard. It basically orders generators not to lose to the environment more than one out of every 20 pounds of a chemical that is used in manufacturing. Our research shows that over one-third of the chemical uses in New Jersey are being used with up to 100 percent inefficiency. In other words, plants are throwing away virtually all of the chemicals that they use despite the availability of a variety of source reduction and recycling techniques.

Clearly, economic factors alone and general exhortation are not driving many generators to more efficient practices, even though there has been a verbal commitment by many in the industry to waste reduction and in some cases that is actually occurring. These highly inefficient uses account for approximately one-third of the total releases of hazardous substances in New Jersey according to their data base. Thus the standard will make the very worst offenders reduce their releases, which we think is a desirable and reasonable goal. As I said, this standard is already achievable for the majority of chemical uses and we think that it will be achievable by the rest within the 10 years, which is a rather liberal amount of time given by the bill for compliance with the standard.

In addition, this kind of standard is very flexible because it lets generators decide how best to achieve reductions rather then telling them to use specified technologies. It will allow them, therefore, to innovate as they see fit. Also, the bill would allow a midcourse correction after some information has been gathered to see whether we can go beyond five percent in specified sectors of the manufacturing economy. Then at the end of the 10-year period, following technical assistance to those who are having trouble meeting the standard, variances would be available if they are absolutely needed.

We think that this scheme is well conceived and that it will achieve dramatic reduction in hazardous waste generation. We therefore strongly support it and urge Congress to enact it.

Senator BAUCUS. Thank you very much, Ms. Bloom.

Our next witness is Dr. Slavik.

STATEMENT OF NELSON SLAVIK, AMERICAN HOSPITAL ASSOCIATION

Mr. SLAVIK. Thank you, Mr. Chairman.

My name is Nelson Slavik. I am representing the American Hospital Association and I also represent the American Society for Hospital Engineering, being Chairman of their Environmental Safety Committee. I am pleased today to testify on behalf of the American Hospital Association which represents nearly 6,000 health care institutions and 40,000 personal members, including members of the Engineering Society.

Hospital and health care workers are very concerned about the appropriate management of infectious waste, and we welcome the opportunity to discuss this issue with you today. Recent events, such as the floating garbage barge and the appearance of medical waste on some beaches have highlighted the growing problems presented by solid waste disposal in the United States. The growing volume of solid waste, the diminishing number of disposal options, and the rising concern among the public clearly point to the need for a national strategy on these issues.

Mr. Chairman, the AHA commends you and your colleagues on the comprehensive approach that you are considering in the reauthorization and amendment of the Resource Conservation Recovery Act, placing infectious waste management under subtitle D. It is imperative that any strategy address both the short-term problems of handling disposal and the long-term challenge of minimizing the amount of wastes that we generate. Innovation and waste disposal methods must be encouraged, and your plan takes a significant step in that direction. Although we believe that the broader problems presented by solid waste must be addressed, today we will focus our remarks primarily on the management of infectious wastes.

We are looking at two major definitional problems. One is: what types of medical waste should appropriately be considered infectious and how should these be defined? The other is: what steps are needed to develop an effective management strategy for infectious waste?

AHA feels strongly that a lack of a clear, nationally accepted definition of this waste is the most significant obstacle to efficient waste management, and that it contributes to public apprehension about the effectiveness of current practices. Without a universally accepted definition of infectious waste and the categories of waste to be subsumed under that definition, a hospital or other health care facility could define anywhere from five percent to 70 percent of its waste as infectious, depending upon which criteria is used. Given that the cost of infectious waste disposal exceeds that of general municipal waste by up to 50- fold, the additional expense of treating waste as infectious must be justified by evidence of the need for greater disease prevention and environmental protection.

The Environmental Protection Agency currently defines infectious wastes as wastes capable of causing infectious disease. The agency correctly identifies five factors that contribute to the risk of induction of disease, which are: the presence of pathogen, sufficient virulence for that pathogen, dosage of the pathogen, a portal of entry, and resistance of host. Unfortunately, most individuals equate the presence of pathogen with infectious waste. The presence of pathogen alone is not sufficient to represent a risk of infection. This concept is difficult for the public to grasp, but is essential if the risk is to be assessed accurately.

All environments except those maintained under sterile conditions harbor some population of pathogenic microorganisms. It is therefore important to remember that all factors that I mentioned must be present simultaneously for disease transmission to occur. In practical terms, individuals seeking a workable definition of infectious waste generally look to specific categories or types of waste. Although this approach is more simplistic, it can result in a tendency to deemphasize or ignore the requisite interaction of all five factors in the chain of infection.

AHA recognizes that waste categories must be used in implementing a workable waste management system. However, adoption of different categories by various Federal and State agencies, particularly across States, has led to considerable confusion among waste generators, haulers, disposal sites, and the public as to which wastes are appropriately defined as infectious.

We urge that a uniform classification system be adopted by all State and Federal agencies and that the system be based on a slight modification of the current definition used by the Centers for Disease Control. This would include categories of: contaminated sharps, microbiological laboratory wastes, human blood specimens and products, and isolation wastes from rare or special cases of extremely contagious diseases.

As discussed earlier, the most significant obstacle to effective waste management is the lack of this universal definition. Thus, the practices across the country will also be inconsistent because of the types of definitions being used. Until this conflict is resolved, it will be difficult to assure that appropriate education and monitoring are being implemented across all areas of waste management. To remedy this confusion, we recommend that a model State regulation of minimum Federal standards be developed along the lines that we discussed. Consistent guidance can go a long way toward the removal of obstacles in prudent waste disposal practices.

Beyond actions to clarify the classification of infectious waste, better guidance is needed regarding the criteria for using various waste treatment mechanisms. States have had little direction on appropriate standards for the use of incineration and other waste management options. As a result, regulation of technology has been very uneven and sometimes unnecessarily restrictive. Consistent criteria for the use of incinerators and other technologies need to be developed that will ensure that waste is managed both properly and in a cost-effective manner. Care should be given that the guidelines do not render incineration economically unfeasible for hospitals, since the option is critical if on-site treatment is to be encouraged. Any Federal regulation regarding the operating standards or treatment technologies should strive to minimize additional costs to avoid unnecessary restrictions that may further limit disposal options.

AHA believes that the reauthorization of RCRA represents an important opportunity to improve the handling of both infectious and other solid waste. We strongly support your efforts to adopt a comprehensive national strategy on waste disposal and minimization. However, we urge that any approach adopted be grounded in scientific evidence of need, not as a result of perception of risk. We look forward to continuing our work with Congress and Federal agencies in redefining waste definitions and the improvement of understanding in the area of appropriate waste management practices. AHA and our affiliate, the American Society for Hospital Engineering, have worked effectively with both the regulators and our members for several years, and we are eager to resolve the remaining problems that we have discussed today.

Thank you, Mr. Chairman.

Senator BAUCUS. Thank you, Dr. Slavik.

Our next witness is Jim Petros.

STATEMENT OF JAMES PETROS, CHEMICAL MANUFACTURERS ASSOCIATION

Mr. PETROS. Thank you and good morning, Mr. Chairman.

Senator BAUCUS. Good morning.

Mr. PETROS. My name is James Petros. I am Assistant Director of Environmental Affairs for Union Carbide Corporation and I also serve as chairman for the RCRA task group at the Chemical Manufacturers Association.

CMA is a non-profit trade association whose member companies represent over 90 percent of the productive capacity of industrial chemicals in the United States. You have asked us here to comment on S. 2773, and because of the time allowed, I will limit my remarks to four issues of major concern to CMA. Our written statement will discuss each of these issues in more detail and will present CMA's views on a number of other issues as well.

First, CMA supports legislation that establishes a workable and effective subtitle D program. The chemical industry strongly supports the national policy statements and objectives of S. 2773. The general approach mandated in the bill, with a State permit program incorporating national guidelines with Federal oversight, is a practical way to implement such a subtitle D program. However, an equitable subtitle D program must also include national criteria for non-hazardous wastes that recognizes different levels of control based on the hazards of the waste. As drafted, S. 2773 in section 204(a) establishes a schedule for the development of specific waste management standards but does not mandate that wastes with similar characteristics receive similar levels of control.

An example of the inequity of such a system is the requirement for specific minimum technology standards for all industrial solid waste surface impoundments contained in section 204(h). To meet the mandate of the Clean Water Act and to comply with those regulations, most industrial plants installed extensive waste water treatment systems in the 1970s. The vast majority of these systems employ surface impoundments. Now this bill would mandate that these systems be replaced regardless of the hazard posed by the waste being managed, a change for which CMA finds no justification.

The standard in section 204(h) is also inequitable because it is the same standard required for hazardous waste surface impoundments under subtitle C of RCRA for wastes that presumably pose a more significant threat than subtitle D wastes. Further there is no distinction between types of non-hazardous industrial waste waters. Cooling water recycle and treatment impoundments and those impoundments which store more concentrated wastes would be required to meet the same standard.

Separating surface impoundments from other types of solid waste and management units may be a good way of recognizing the unique characteristics of waste water. The problem with S. 2773 however, is that it rigidly specifies technology for all industrial surface impoundments without regard to the characteristics or potential hazards of those wastes.

While there are exemptions in the bill to the minimum technology standard, these exemptions are very limited. Rather than repeating the hazardous waste technology requirements and exemptions in subtitle D, Congress should require EPA to set standards for solid waste surface impoundments commensurate with the hazards posed by the different types of waste.

A second issue I would like to discuss is corrective action. CMA supports a requirement for corrective action where solid waste management facilities are causing or may cause harm to human health or the environment. However, the corrective action provisions of this bill should be revised to clearly limit remediation to releases which cause harm to human health or the environment.

Another major problem with the corrective action requirements is the unrealistic schedule to evaluate potential releases and to implement corrective action within one year. Further, S. 2773 uses terms which are ambiguous in RCRA to define corrective action responsibilities, such as the terms "facility" and "hazardous substances."

Now I would like to turn to the waste minimization and recycling requirements outlined in title III of the bill. The chemical industry has been a leader in waste minimization and agrees that waste reduction is the best form of environmental protection. Therefore, we support many of the waste reduction provisions, such as State assistance, data base development, technical assistance grants, an information clearing house, and other measures which promote voluntary waste reduction.

However, applying the 95 percent efficiency standard of section 305 to manufacturing processes will be complex and inequitable. Large continuous processes may well meet the standard today, whereas small batch purification processes or ones with inherently low yields will not and can not meet such a standard. Even among large processes, individual SARA section 313 chemical yields may not exceed 95 percent. For example, many industrial processes require the use of catalysts which contain section 313-listed metals to improve yields. Periodically the spent catalyst must be replaced with new materials and must be disposed or shipped off site for reclamation. The efficiency standard proposed in section 305 for such catalysts will always be zero percent.

Another major problem with the proposed efficiency standard is its failure to account for recycling. As drafted, the 95 percent efficiency standard is measured only by the amount of a SARA 313 substance brought into a facility versus the amount consumed, released, or shipped out as product. The chemical industry has made extensive use of on-site recycling, yet the efficiency standard would penalize the use of recycling in its calculation. This is in direct conflict with the waste management hierarchy established in section 102(b) of the bill.

The bill also mandates mass balancing for SARA section 313 chemicals in complex continuous monitoring of industrial process discharges or emissions. Mass balancing is a technically complex process and reliable instrumentation for continuous monitoring simply does not exist for many such releases.

We strongly urge Congress not to proceed with this continuous monitoring of the percent efficiency requirements until the National Research Council completes the mass balance study required by the 1986 SARA amendments. This study is due in early 1989. The efficacy of any efficiency standard is going to be dependent on our ability to implement mass balancing. Therefore, the subcommittee should strongly consider the result of the NRC study and modify the bill accordingly.

Finally, let me touch on the product regulation provisions in section 310. It is inappropriate to require EPA to develop a "hit list" of 10 products each year without identifying the criteria for evaluating whether the product deserves the damaging stigma that would be attached to such a listing. Section 6 of TSCA currently contains such criteria. It provides the agency with ample authority to regulate the disposal of products or to take other actions, including the banning of specific products that meet the reasoned criteria stipulated by Congress in drafting the statute.

Furthermore, existing RCRA State authority and the new authorities proposed in section 204 of this bill provide the controls necessary to protect human health and the environment from substances remaining in discarded consumer products. Product regulation in section 310 is a wholly unnecessary and duplicative layer of controls.

We look forward to working constructively with the subcommittee as it continues to consider this and other legislation reauthorizing RCRA. Thank you.

Senator BAUCUS. Thank you, Mr. Petros.

Our final witness on this panel is Marcia Williams.

STATEMENT OF MARCIA WILLIAMS, BROWNING FERRIS INDUSTRIES

Ms. WILLIAMS. Thank you, Mr. Chairman.

My name is Marcia Williams and I am Vice-President for Environmental Policy and Planning for BFI and also Vice-President of Environmental and Regulatory Affairs for CECOS, our hazardous waste subsidiary. Prior to joining BFI in February 1988, I spent 18 years at EPA, most recently as the Director of the Office of Solid Waste where I was responsible for implementing RCRA and the 1984 HSWA amendments.

BFI is one of the major waste management firms in the country, operating in 45 States, over 225 Congressional districts, and active in each of the aspects of waste collection and disposal covered in S. 2773. We are also active in hazardous waste management and would be pleased to provide observations on hazardous waste improvements to RCRA at a later date. We are extremely happy to have the opportunity to testify this morning on one of the dominant issues of our day, both the generation and the management of all types of solid waste.

These issues are in the forefront of national and local news on a weekly and often daily basis. We applaud you for introducing this bill. We think that it is an excellent effort and that it is to be complimented in three important areas.

First, in broadening the coverage of waste management to focus on the full range of potential concerns. Secondly, providing more attention at the front end of the issue, the generation of waste. This is the type of focus which will do the most to foster waste minimization. Finally, looking for the proper mix between Congressional directives and flexibility for the EPA administrator, as well as the proper mix between roles for the Federal Government and the States.

Our written testimony covers many provisions of the bill in great detail. This morning, I would like to focus on two broad areas: infectious waste and the actual implementation of these solid waste provisions. Let me begin with infectious waste.

We keep getting asked why this issue has surfaced recently, and we have come up with what appear to be three important reasons. First, potentially injurious objects are more likely to be thrown away now than in the past. In the past, sterilization and reuse were much more common. Secondly, health care services today are much more often provided away from hospitals. These smaller health care providers do not have the on-site options that have traditionally been available to hospitals. Thirdly, there is an increased level of public concern over communicable diseases. The question is raised as to who is at risk. Clearly waste management workers are at risk, ranging from solid waste collection personnel to landfill operators, to truck maintenance personnel. Our testimony goes through a number of examples of specific situations.

At lower health risk is the general public, but the aesthetic and environmental concerns are equally significant. Moreover, this is not just a beach issue—without a proper waste disposal framework, medical waste will be mismanaged in a variety of ways. Ocean dumping is one way; improper co-disposal is another way. I have brought with me today and will give to you at the conclusion of my testimony, some pictures which graphically bring home what the waste industry sees on an all too frequent basis. It is not a pretty sight.

We have three main concerns with the current regulatory situation in the States. Most State regulations involve less than comprehensive coverage of waste: poor definitions, loopholes in small-quantity generator exemptions, and loopholes in on-site exemptions. Also, many State regulations have poor permitting and enforcement mechanisms. Finally, there are very different manifesting requirements, which make it very difficult to ship any kind of biomedical waste interstate.

S. 2773 is an excellent start. It provides for segregation, state-of-the-art treatment, permitting of all sites, and tracking of waste under subtitle D. We would suggest three other things for you to consider.

First, whether it would be appropriate to have EPA develop pilot programs for things such as household infectious waste, rural infectious waste, and take-back systems for sharps. Secondly, to consider hammer dates for States picking up minimum standards or, in the absence of picking up those minimum standards, having EPA guidance made federally enforceable. Thirdly, to consider whether the small-quantity exemption for certain types of waste should not be set at zero—we believe that it should.

Let me now move to the implementation phase. This is really where the rubber meets the road and where we need to look at the hazardous waste program to learn some lessons for the importance of the implementation of any program. The first issue that I want to touch on is how to avoid gridlock.

Let me touch on two clear areas: siting and permitting. S. 2773 does a good job of addressing both these issues. However, I would like to share with you a couple of additional thoughts. With regard to siting, the planning process might want to specify interim dates or sanctions earlier than the 2½ years currently in the legislation, since many States can not afford to wait that long to act. In particular, I would suggest that we consider looking at net exporting States today to see if we can figure out an earlier phase-in deadline. Also, Congress should consider what penalties should occur if States do not implement their plans on schedule once the plans are approved.

In the area of permitting, Congress or EPA should look at procedural mechanisms, such as class permits, permits by rule, separate operating and corrective action permits, and various kinds of hammer dates for achieving different kinds of milestones. Again, if we look at the hazardous waste system, we can see how easy it is to get into a permitting gridlock mode that will not accomplish anything in terms of the original objectives.

The second implementation issue that I want to touch upon is enforcement and compliance. This is clearly the most difficult and challenging aspect of the legislation. Enforcement must be comprehensive in coverage and in its uniformity. BFI suggests considering the use of third-party independent audit mechanisms. For example, facilities could be required to provide independent audit results annually or biannually, and States could be required to provide independent audits as to the effectiveness of their permit and enforcement programs, either to Congress directly or to EPA.

The last issue that I want to discuss with regard to implementation is the transition issue. We must ensure that as we move from a national patchwork of regulations that are weak in many States and strong in a handful of States to a strong set of standards nationwide, that we do not promote extending the use of bad capacity as a short-term solution and that we do not create incentives to mismanage waste due to the local capacity shortfalls and barriers to interstate movement of waste. The possible solution that we suggest is that during the short window of time needed for States to complete the planning process, Congress might consider preempting States' abilities to apply discriminatory limitations to out-of-state waste, including fees which are above the true cost of managing these out-of-state wastes. We can all see examples of States that are looking to implement fees as high as $75 and $100 per ton on out-of-state wastes.

Thank you for allowing us to participate. We want to congratulate you for an excellent effort at starting this important dialogue, and we look forward to continued participation with you.

Mr. Chairman, may I just bring you these pictures?

Senator **Baucus**. Certainly. I would like to first address a question to the panelists on the subject of minimization. I think that we all agree that it is a proper direction—that is that we should strive toward more source reduction and more minimization. Obviously it is difficult, certainly more difficult in some areas compared to others. What it comes down to is how to fashion a bill that encourages us to move very forthrightly, yet with some sense of reason and paying attention to practical considerations.

I would like to begin, then, by asking you, Mr. Petros, how far you think that the chemical industry is already moving toward minimization, if you can quantify that in some way? Then second, could you indicate with more specificity and in more generic terms which industries you think will have a more difficult time reaching the five percent standard in the bill and the reasons why?

Mr. **Petros**. Let me try to address the first question, Senator.

The chemical industry has been involved in waste minimization and recycling for a long period of time—my own company, dating back to the 1970's, has certainly recognized the economic benefits of recycling solvents, catalysts, and a wide variety of other materials, both for energy and material recovery. At CMA, for the last several years, we have had a formal board-approved position that encourages all of our members to undertake comprehensive waste minimization programs.

In terms of quantification, we have seen through our annual survey, which only deals with hazardous waste, a reduction over the last six years in regard to the amount of hazardous waste produced by the chemical industry even as the production of chemicals from our industry has risen each year.

Senator BAUCUS. Can you give some examples?

Mr. PETROS. Examples of?

Senator BAUCUS. Of the reduction.

Mr. PETROS. I do not have the numbers with me, but our report which we have issued annually had a large amount of information in it which documents what those reductions are.

Senator BAUCUS. How much of that reduction is because of RCRA, because of laws and State regulations that tend to force it, and how much of it is purely voluntary by your company or other companies, which for other reasons, such as economic reasons, are achieving on their own?

Mr. PETROS. At this point, I am not sure that much of it has been as a result of mandate under law. I think that most of the programs which I am aware of have been done on a voluntary basis.

Senator BAUCUS. I mean those that may not be mandated directly, but are indirectly enforced.

Mr. PETROS. In terms of looking at long-term cost liabilities, certainly there has been a large movement toward reducing the amount of waste generated. I can give you some examples from my own company regarding some of the things that we have done on a purely voluntary basis.

Over the past three years, we have reduced the amount of air emissions, of toxic chemicals by about 50 percent and have expended approximately $35 million during that timeframe in reducing those emissions.

Senator BAUCUS. What about the second question? That is: what chemicals can meet the five percent provisions of this bill—remembering that there are variances and interim corrections and so forth—and which other chemicals, products, or industries can not?

Mr. PETROS. I am not sure that I can answer that question on a generic basis. The wide variety of chemicals manufactured and used as raw materials makes that a very difficult question to answer on a generic basis. The example I gave was metallic catalysts, which by definition are not consumed in a process.

Senator BAUCUS. Can you give me a better idea though, because we are trying to write a bill here?

Mr. PETROS. In looking at chemical processes, we are going to have some processes that are inherently efficient in their yield. Certainly there are some processes that exceed 95 percent efficiency now. However, there are some processes where the processes are inherently inefficient because of the nature of the chemical reactions that are being utilized. Those processes—and I can not name a specific chemical process—are just inherently inefficient and probably would never meet the 95 percent standard. CMA feels that in any attempt to identify national goals, which we support, there needs to be some recognition of the diversity of the industry and the processes which are being evaluated.

Senator **Baucus**. I agree with that. We need to recognize the diversity, which is why I am asking these questions. We need to flush out more precisely the nature of the diversity in order to address that question.

Mr. **Petros**. To the extent that we can identify additional specific information and incorporate that into our written testimony, we will be glad to do that. (See p. 315.)

Senator **Baucus**. Ms. Bloom, would you try to answer the second question from your perspective and perhaps your associate can also address the question?

Ms. **Bloom**. I would like to respond to both questions if I may. As to how much reduction is going on voluntarily, we have looked at CMA's data, which was apparently collected between 1981 and 1986, and our review of the CMA data—and also OTA's review of it—suggests that in fact, reductions are not taking place, and that rather significant increases in solid hazardous waste generation have occurred over that period of time. This is, if you take into account changes in RCRA definitions over the past several years, but even if you do not, we see only a very weak downward trend.

Another example that I can give is of a voluntary waste reduction program which the State of North Carolina has run and which is considered to be the leading program in the Nation. It is acknowledged to be the most effective, and recently we learned that in 1987, waste generation in that State, after having declined for three years is now up by 38 percent. That is not to say that there are not many well-intentioned efforts ongoing both in North Carolina and by CMA member companies, but simply that we can not now say that dramatic reductions are taking place on a systematic basis. Our experience with other environmental laws suggest that the motivating factor in many of these cases is regulation—regulation is a very strong motivating factor.

One other thing that I want to point out about the data on waste generation is that you have to be pretty careful when you look at figures about waste decreases. Source reduction is really a multimedia issue and most of the data that has been collected to date has only concerned RCRA hazardous wastes. We do not know how much is actually going into air or surface water that has been transferred due to tightening down on the RCRA program.

As to your second question, having to do with the five percent standard and who that would affect, I would like to turn that over to my colleague, Ned Smith.

Mr. **Smith**. Our research and analysis of the New Jersey data shows very clearly that, generally speaking, this standard is going to affect those companies who are neither manufacturing nor processing chemicals, but are using them as solvents, catalysts, or manufacturing aids of one form or another. If you then translate that into industrial sectors, you find that the chemical industry, which of course is in the business of manufacturing and processing chemicals, generally would tend to meet the standard, although the data again show that perhaps as many as 25 percent of the chemical uses in the chemical industry would not be meeting the standard. That is because the chemical industry itself—as Mr. Petros just mentioned—also uses chemicals as solvents, catalysts, et cetera. Those kind of chemical uses would tend not to meet the standard.

If you go outside of the chemical industry, and outside also of the petroleum industry, you generally find that all of the other sectors in the manufacturing sector tend to have about the same amount of difficulty in meeting the standards. That is to say that about the same fraction of their chemical uses would tend to be above a five percent standard and they would therefore have to do something to come down to that standard.

Senator BAUCUS. What fraction would that be?

Mr. SMITH. It is roughly 70 percent. In the non-chemical industries of the manufacturing sector, you find that roughly 70 percent of the individual uses of chemicals would have to do something to meet the standard.

Senator BAUCUS. Given present technologies and the likelihood that new technologies might develop, with what degree of difficulty could that 70 percent be met over the next 10 years, given our mid-course corrections and variances, waivers, and so forth?

Mr. SMITH. My feeling is that a five percent standard is not technologically very stringent. We are talking about a standard that would say that you can not release more than one in every 20 pounds of a chemical that you use. We are not talking about trying to find a needle in a haystack here. Indeed, OTA believes that roughly comparable reductions of 41 percent in five years (which is 65 percent if extrapolated over 10 years) could be achieved using presently available technology.

If you look, then, at the kinds of uses where you would expect there to be the most technological difficulty—that is to say those uses where generally speaking all or nearly all of the chemical which is used is eventually released—you often find that there are already technologies available or soon to be available, notably reclamation technologies, which would allow those kinds of chemical uses to come down to the five percent standard. We must remember that this would be occurring over a period of 10 years. That is a long time in terms of technological innovation. Industry would have 10 years in which to see which of its chemical uses need to be reduced or need to be more efficient, and would have 10 years in which to search for the technologies that it needs, and if it does not find them immediately, 10 years in which to do the necessary research and development to come up with the necessary technologies. I think it is very important that we see this in the context of a system which would not only not set a very stringent standard, but would also give industry a long time to meet that standard.

Senator BAUCUS. So, generally speaking, do you think that the provisions of this bill are fair or unfair? What do you think?

Mr. SMITH. Mr. Chairman, I think that when you consider all of these things, this is a fair bill, and I think that it is especially fair if you consider two provisions in the bill. One is the fact that there is a provision for mid-course corrections, which would allow if necessary for more stringent standards to be set for types of chemical uses which very easily meet a five percent standard. It might be argued that it is inequitable in these cases for companies not to have to do anything. That mid-course correction plus the variance provisions would also allow industry to come forward and make a fair case in situations such as Jim Petros talked about, for instance—where the stoichiometric considerations would make it scientifically impossible to meet the standard. Those industries could come forward to make their case that they can not meet a five percent standard, and in their case a standard which is tailored to their particular situation can be promulgated.

Senator BAUCUS. What about that, Mr. Petros? That sounds pretty reasonable.

Mr. PETROS. I think that some of the areas where we might have some disagreement revolve around the issue of definitions and how you measure the standard and how you apply it. For instance, in a major petrochemical complex, do you apply it to all releases of a particular chemical or do you apply it on a process-by-process basis, some of which are inherently efficient and some of which are inherently inefficient. I think answers to some of those kinds of questions may in the long run allow us to look at performance standards or efficiencies to resolve some of the issues that we have raised.

Senator BAUCUS. But if that is worked out in some reasonable way, why isn't the standard in the bill a good one? It is pushing us as a country toward more minimization and hopefully it is doing it in a responsible way by addressing some of the concerns that you are raising.

Mr. PETROS. Again, Mr. Chairman, the only thing that I have looked at is the actual language in the bill that you have entered, and it is difficult to come to grips with some of the more complex definitional questions without seeing specifics on them.

Senator BAUCUS. I would like to turn now to medical wastes. First, let me ask you, Dr. Slavik, how much medical waste do we generate in America in a year, roughly?

Mr. SLAVIK. That is a very difficult question to answer. I think it depends on which definition you are using——

Senator BAUCUS. The broader definition of medical waste, which would include infectious wastes.

Mr. SLAVIK. Yes, if you look at infectious waste from the point of view of overall medical waste generated, overall medical waste can be a considerable amount. Looking at it from a health care facility, you are looking at anywhere from 15 to 20 pounds per patient bed per day in a typical hospital.

Senator BAUCUS. That is overall medical waste, correct?

Mr. SLAVIK. That is correct.

Senator BAUCUS. What percentage of that would be infectious waste?

Mr. SLAVIK. Of that, anywhere between five and 70 percent is being designated as infectious according to whose definition you are using at the time. If you use the definition put forward by the Centers for Disease Control, which is very similar to the one that I propose in my testimony, you are looking at about five percent. If you look at the EPA guidance document's definition, that is the definition prescribed by EPA in their 1986 guidance document, you are looking at anywhere from 10 to 15 percent of that number. And if you apply what inappropriately has been termed as "universal precautions" from the Centers for Disease Control—that is body substances, fluids and blood from patients and patient-contact materials—that definition could be amplified literally to 70 or 80 percent of the total waste coming out of a hospital on any given day.

When I say inappropriately applying that definition—the definition put forward by the Centers for Disease Control said that prudence dictates that universal precautions for employee handling of patient wastes does not necessarily make the transition into a waste that is infectious. One has to take some discriminatory action at the site of the generation of that waste.

From the definition that I think most people will go with at this point in time, you are looking at 10 to 15 percent of the 20 pounds generated per patient bed per day.

Senator **Baucus**. Do you think that the EPA definition that you are referring to is reasonable?

Mr. **Slavik**. It is a reasonable definition if appropriately approached. One aspect of the definition that plays a really flexible role and has to be addressed quite succinctly at this point has to do with isolation waste. Back in 1985 when we wrestled with this definition, isolation waste primarily dealt with those wastes coming from patients who had communicable diseases as defined by Centers for Disease Control. Now the isolation waste definition has been somewhat inappropriately redefined by the universal precautions dilemma, and that is where the main area of contention lies right now.

If you go back to the original intent of what isolation wastes really are, that is from diseases that are very contagious in their nature, then one has no problem with that definition.

Senator **Baucus**. What are some examples of materials that you regard as infectious wastes, which should be more stringently controlled, and could you then give us some examples of other medical wastes which you think are clinically not infectious, but which are perceived by the public to be infectious wastes?

Mr. **Slavik**. That is a very good question. I think that you are looking at aesthetics versus the real thing.

Senator **Baucus**. Could you give some examples in the second category, because that is probably the most important? That is waste which most folks think is infectious, but in your judgment, is not.

Mr. **Slavik**. This would be material that may be trace-contaminated by blood or body fluids.

Senator **Baucus**. What are we talking about specifically?

Mr. **Slavik**. We are talking about materials that could emanate out of an isolation patient's room.

Senator **Baucus**. For example—what?

Mr. **Slavik**. That could be drapes, gowns, gloves, and things of that nature. By definition, just because of patient contact, these could have one or two microorganisms on them, maybe more—but by definition, not being able to really transmit disease in a microbiological sense. These materials may appear to have a medical pathogenic content, just by virtue of appearing as a medical waste.

Senator **Baucus**. But aren't some diseases more infectious than other diseases?

Mr. **Slavik**. Certainly.

Senator **Baucus**. So the gowns might be more of a problem from some patients than from some other, right?

Mr. **Slavik**. That is correct, and that is why we made a statement that we are looking at isolation waste from those diseases as being termed ones which are truly infectious via inanimate objects. Many diseases can not be spread by being in contact with an inanimate object.

Now one of those inanimate objects that can and does cause disease is contaminated sharps—specifically needle and syringe type of complexes which offer a portal of entry. That is a real concern for health care, and I think it is probably the major infectious waste concern that the American Hospital Association has and also that the EPA has, because they offer not only the mechanism for pathogenic microorganisms to enter the body, but also can harbor a significant quantity of microorganisms to transmit disease.

Senator BAUCUS. Ms. Williams, I would like to ask you for your industry's point of view of the differences between perception and actual danger in handling medical wastes. Do you have any advice here based upon your company's experience?

Ms. WILLIAMS. I think that the biggest dangers from the perspective of our industry are clearly to the workers. We have examples where sharps have been lodged within the vehicle. Then when a maintenance worker goes in to maintain that vehicle, he gets punctured. There are situations of landfill owners who traverse the open site of the landfill and can get punctured if there are bags of things like sharps around. We would certainly agree that sharps are right at the top of the list of things to be concerned about.

We are talking about what is very much a worker risk. I think that the pictures that we provided to you will show that in some of those cases we may not be dealing with things that are infectious from a communicable standpoint, but aesthetically, I do not think we would like to see our medical waste managed the way some of those pictures suggest that it is currently being carried out, with all sorts of body parts and things like that being thrown into the garbage.

Senator BAUCUS. You are saying that aesthetics are also a component?

Ms. WILLIAMS. I think that is something that the general public is concerned about as an issue independent from a health issue.

Senator BAUCUS. But you are going further as I hear you. You are saying that not only is the public concerned about it, but that the public should be concerned about it and that we should go farther and that the definition of infectious waste should include not only clinically infectious material, but also some aesthetically undesirable material.

Ms. WILLIAMS. That is correct. I think that there are types of material that fall into the category of biomedical waste that would not necessarily fall into the category of infectious waste——

Senator BAUCUS. Such as?

Ms. WILLIAMS [continuing]. Such as body parts, for example. They may or may not be infectious, but what one finds at some of the landfills today is not very appealing.

Ms. BLOOM. Mr. Chairman, I would like to add a slightly different perspective to this. Apart from aesthetic considerations, we consider those to be environmental considerations. RCRA deals not only with protecting human health, but also with protecting the environment, and clearly the fouling of beaches with waste that may not be infectious but is nonetheless medical waste, is an environmental problem. Therefore, we do not see such a distinction between infectious and other medical wastes in terms of the need to regulate these things.

Senator **Baucus**. Can you give some examples of noninfectious wastes that present environmental problems?

Ms. **Bloom**. There is certainly some debate over how long a waste remains infectious for example when it is plunked into the ocean and ultimately washed up on a beach. Whether or not by the time a sharp gets to the beach it is infectious, it is still going to cause the closing of beaches, and we would therefore be concerned about it. We think that although the provisions of your bill would go one step in the right direction, we would want to see all medical waste designated as RCRA hazardous and put into the existing management system that we have for them.

Senator **Baucus**. You are shaking your head there, Dr. Slavik. Why are you shaking your head?

Mr. **Slavik**. To classify infectious wastes with the same degree as toxic waste is assuming that there is the same potential of risk, and there certainly is not the same potential for risk here. In fact, from an environmental and public health standpoint, you are looking at infectious waste having a decreased potential over time, rather than an increased potential over time as some truly toxic wastes.

Senator **Baucus**. That may be, but what about the stuff rolling up on the beaches?

Mr. **Slavik**. That again could be considered part of the overall solid waste problem. We are looking at it from the standpoint also as putting infectious material into the hazardous connotation, putting it into a liability situation that could force some hospitals out of business. We are talking about liability insurance and a number of issues from a public relations viewpoint, such as the hospital being labeled a generator of hazardous waste. We are talking about issues that from a public relations standpoint could have a disastrous effect. I think that in reality, under subtitle D, using the connotation of a solid waste that may have a special waste connotation is a more reasonable approach for infectious waste and the potential of risk that this material has. Again, no environmental or public health disease exposure has been presented here. We are looking at occupational exposures, certainly, from needle sticks that can cause the transmission of disease, but we know of no evidence of disease transmission to the public or to the environment that has been caused by infectious waste. Therefore, putting it into a hazardous waste classification would, I think, be very inappropriate.

Senator **Baucus**. Ms. Williams?

Ms. **Williams**. One other possible thing to be considered is to keep a broad definition where the definition covers things like the segregation of the waste and tracking of the waste—perhaps broader than Dr. Slavik would like—but on the other hand, recognizing that some of the provisions for pretreatment may not have to apply to the very broad category of waste and would be saved essentially for the infectious material. That would be a trade-off between the cost and the fact that you have to deal with aesthetics and environmental concerns as well.

Senator **Baucus**. How do hospitals presently manage infectious waste?

Mr. **Slavik**. They use one of three ways. They will use on-site incineration to render that waste non-infectious and also to ash, or secondly, they might use steam sterilization or autoclaving, which treats the waste by knocking down the number of microbes so that the potential for disease transmission no longer exists. That waste can then go to a general landfill. The third way is used when neither of those on-site treatment mechanisms are available. They then use off-site services, which then would use one of those two other treatment mechanisms at an off-site facility.

Senator **Baucus**. As you know, in the bill we can keep it under subtitle D, but probably with a special category.

Mr. **Slavik**. That would be fine from our perspective.

Senator **Baucus**. It may be fine depending on how special it is. Anyway, that is the intent.

I have no more questions at this point, but before you leave, I have a note here that Senator Mikulski had wanted to be here because she is very interested in this subject, particularly medical waste. I just wanted to express her deep continued interest in this subject.

Thank you very much.

Our next panel consists of William O'Keefe from the American Petroleum Institute; Richard Denison, the Environmental Defense Fund; Catharine deLacy of the National Environmental Developmental Association; and David Boltz from the American Iron and Steel Institute.

Would you all come forward and be seated, please.

Mr. O'Keefe, would you begin?

STATEMENT OF WILLIAM O'KEEFE, AMERICAN PETROLEUM INSTITUTE

Mr. O'**Keefe**. Thank you, Mr. Chairman.

My name is William O'Keefe and I am Vice-President and Chief Operating Officer of the American Petroleum Institute. API represents over 200 companies involved in all aspects of oil and gas.

Today I want to present my industry's views on the Waste Minimization and Control Act of 1988. My testimony will supplement my prepared statement.

Before addressing specifics, I want to offer some general comments to clarify our thinking on this legislation. First, waste must be properly managed to protect human health and the environment. Waste minimization, where realistic and efficient, can make an important contribution. In fact, API has projects underway that will increase our industry's knowledge of waste minimization technology and practices, and many of our members have their own programs.

Secondly, the Nation is entitled to efficient laws and regulations. They should be based on sufficient scientific and technical information to accurately reveal the nature and consequences of problems. They should produce demonstrable benefits proportionate to society's costs. Stringent rules and complexity for their own sake or mandates of sophisticated technology merely because it exists is counterproductive.

Achieving these goals requires evaluation of what has gone before. This is the third reauthorization of RCRA. Where RCRA has worked, there is no need to reinvent the wheel. Only by understanding what has or has not worked and why, can legislation accomplish realistic goals, compatible with other goals of society. With these thoughts in mind, let me present what we view as the strong points of the proposed legislation.

API supports policy guidance that establishes a hierarchy of ways to manage waste. This policy must however, recognize differences in operations that may make some approaches impractical. For example, in my own industry it is impossible to produce oil without producing water. Obviously methods other than waste reduction must be used to manage this waste. API also supports the commitment to State responsibility for waste management programs. Because of the diverse nature of solid waste problems across the country, State planning and controls are necessary to address these problems successfully. Although some may seek a stronger Federal role, the legislation follows a well tested management principle: delegate responsibility for achieving goals and enforce accountability. Finally, API supports the concept that different levels of controls are required to reflect differences in the hazards posed by waste. These hazards are based on such factors as volume and composition, characteristics of sites where wastes are generated and disposed, proximity to population, management practices, existing regulation and the potential for waste minimization.

Although many provisions in the proposed legislation are consistent with the principles that I identified, API has a number of concerns. I will just highlight three of these.

The first is duplication. Under existing statutes and regulatory programs, many solid wastes are already adequately managed. Thus, some provisions in the bill may be unnecessary or premature. An example is oil and gas expiration and production waste. Under a RCRA mandate, EPA studied these wastes for two years and reached two important conclusions. First, when properly managed, they do not pose a significant threat to human health and the environment. Second, existing State and Federal programs governing these wastes are generally adequate. However, the agency also concluded that further evaluation was necessary to identify potential regulatory gaps and potential improvements in State law. EPA should be allowed to complete this evaluation before further legislation is enacted.

A second concern is overly restrictive provisions. For example, the double liner requirement for all surface impoundments of nonhazardous industrial waste lumps together wastes of widely varying characteristics and widely varying locations.

A third concern is rigid waste minimization provisions. A single efficiency standard is unrealistic. Each industry is different—within the petroleum industry, each refinery is different. Different crude oils vary in composition as well as the amounts of water, salt, and sediments that they are produced with.

I want to close, Mr. Chairman, by citing a few observations of former EPA Administrator William Ruckleshaus. I believe that they are relevant to this legislation. He said, "While it is a fine thing to embody high ideals in legislation, laws should be written so that mortals can put them into effect in this imperfect world." Unfortunately, this has often not been the case, and in his view, "failure to meet unrealistic promises has led to even more stringent proscriptions and this has accelerated the cycle of disappointment and mistrust." Ruckleshaus' solution: "provide flexibility so that risks can be dealt with in the local context, involve the local public in decision making, and balance risk against the economic impacts of control."

I endorse this approach and I hope that it, along with my comments today, will be given careful consideration as the process for reauthorization continues.

Thank you, Mr. Chairman.

Senator BAUCUS. Thank you.

Mr. Denison, you are next.

STATEMENT OF RICHARD DENISON, ENVIRONMENTAL DEFENSE FUND

Mr. DENISON. Thank you, Mr. Chairman.

I am Dr. Richard Denison, a scientist in the Toxic Chemicals and Solid Waste programs at the Environmental Defense Fund.

EDF has been active in the area of solid and hazardous waste management for a large number of years. Our recent activities have focused on several aspects of solid waste management and an attempt to promote recovery, recycling, and reduction of those wastes and to ensure that waste management activities are carried out in a manner that fully protects human health and the environment.

Today I would like to focus my oral statement primarily on several issues having to do with solid waste management in terms of reduction and recycling. EDF considers that S. 2773 represents a major step forward in ensuring that waste reduction and recycling reach their full potential. We consider the bill to be a much needed step toward expanding the scope of RCRA beyond its traditional thrust of ensuring proper waste disposal and more toward what many argue is the original intent of RCRA, to promote the conservation and recovery of materials that comprise waste as the means of achieving the closely related goals of reducing the amount and toxicity of waste and ensuring environmental and public health protection.

The legislation that we are considering today identifies two critical but largely unaddressed roots of our solid waste management crisis. First, it recognizes that the problems we face in waste disposal begin long before the actual discard or discharge of waste materials. Decisions made at early stages of product formulation, marketing, and packaging profoundly affect the environmental and the economic viability of our waste management options. Yet, no mechanism currently exists for even influencing such decisions in order to reduce the toxicity and the amount of such products and their packaging or to increase their recyclability or their safety of disposal. We applaud your efforts to address this fundamental source of the crisis that we face.

Second, the legislation recognizes that successful conservation and recovery of materials as well as sound waste management depends on maximizing the segregation of different components of our waste stream. The value of recovered materials and the ease, economy, and safety of waste management are increased dramatically through implementation of source separation, intermediate waste processing facilities, and other similar approaches. Indeed, our nation's solid waste management system could benefit greatly by taking to heart the old adage that pollution and waste are simply resources out of place.

Finally, the legislation recognizes the critical need for planning and the commitment of financial and technical resources at all levels of government. Implementation of the waste management hierarchy will require a concerted and sustained effort that no single unit of government can accomplish alone. EDF believes that a strong Federal regulatory, technical assistance and funding role, virtually non-existent in the solid waste arena in the last decade, is more than warranted.

I would like to offer my perspective on several specific aspects in the time remaining. EDF supports the concept of setting national recycling goals, but would like to emphasize that we do not believe that those should serve as upper limits or be viewed in that way in any respect. From a technical perspective, significantly higher levels of recycling should be achievable over the long term and should continue to be striven for.

In working to achieve such goals, States should be required to develop mechanisms for ensuring that recycling is able to compete under the same ground rules as incineration and landfilling. State plans, for example, could be required to include comparative economic analyses of the various options and incorporate the hidden subsidies and external environmental costs that are now frequently ignored. Only through such means can the goal of achieving 50 percent or more recycling—where recycling constitutes least-cost disposal—only through such means can that be fairly and accurately assessed.

EDF strongly supports the establishment of an office of waste minimization, a State grants program, and a clearinghouse for waste reduction. We also support the formation of a national packaging institute and the innovative concept contained in the bill of waste reduction petitions to EPA to require certain additional measures be taken.

Finally, we would emphasize the importance of dealing with the problem of hazardous constituents in products. It is important to recognize that certain hazardous components of waste represent environmental and health concerns no matter how they are managed, whether that be through landfill or incineration or recycling. The language of the section should be revised to reflect this. We also support the concept of a packaging tax as a major step forward in compensating for the host of Federal programs that now subsidize the exploitation of virgin materials and in providing a much needed source of revenue.

I would like to emphasize one or two aspects on the solid waste disposal side of the issue. We certainly agree with the requirement in the bill for a permit to be issued for all facilities managing waste. We are concerned, however, that several aspects of this section dealing with existing facilities would largely "grandfather" these into the system without sufficient assurance that they will comply with the requirements of the section. Detailed comments on this point are contained in my written testimony.

I would like to close by emphasizing our support for the provisions of the bill that deal with waste export and by applauding the committee for recognizing and addressing this serious concern. Thank you.

Senator BAUCUS. Thank you, Mr. Denison.

Next is Catharine deLacy.

STATEMENT OF CATHARINE deLACY, NATIONAL ENVIRONMENTAL DEVELOPMENT ASSOCIATION

Ms. DELACY. Thank you, Mr. Chairman. I am Catharine deLacy, Project Director of the National Environmental Developmental Association's RCRA project. We appreciate the opportunity to be a part of the discussions on the critical issue of waste management.

NEDA is a 15-year-old labor, industry, and agriculture membership organization dedicated to fulfilling both the public's demand for a clean and healthful environment and the equally pressing need for industrial development and growth. The NEDA RCRA project consists of members representing the consumer products industry, the chemical and petroleum industry, and the steel and mining industries. These companies have made a commitment to being progressive and proactive in their approach to the management of environmental issues.

My statement today represents the NEDA RCRA project's views on S. 2773, the Waste Minimization and Control Act of 1988. In general we support and applaud you, Mr. Chairman, for addressing a most important issue facing us in the reauthorization debate—how America is going to manage its wastes. As industry is a leader in waste management, we acknowledge that waste is in fact a problem and our members intend to work with you, using our technology and expertise toward the solution.

Specifically, we support the thrust of this legislation and the insight of this committee for recognizing that there are options for dealing with waste, such as waste reduction, recycling, treatment and disposal. The NEDA RCRA project supports an integrated approach to the waste problem based on appropriate technologies and regional needs. We feel that an integrated approach recognizes that all waste activities are needed and avoids the risk that a hierarchical approach could perhaps slow down the siting of necessary and safer new incinerators, landfills, or other treatment units. Each community and region is different, both in waste problems, and more importantly, in their economics. The provisions for State and regional planning contained in the bill are important in this context. We support a Federal guiding hand where appropriate to expedite the waste management process.

NEDA is also pleased to see a constructive approach to the permitting and solid waste process, which is expressed in this legislation. Although some specifics are still of concern to us, in particular the extent of the permits required, permit timing requirements, and the role of guidelines, we are nevertheless pleased to see a focus on the permitting process which should expedite the siting of new facilities. Clearly there is and will continue to be a need for siting facilities in order to achieve the optimum integrated approach for communities.

Members of the NEDA RCRA project, like you, are committed to some vital elements of waste management programs. The goals to this end include education, technology exchange, and economics. We are committed to taking a leadership role in all of these areas and have, in fact, initiated several programs to demonstrate our level of commitment. Our members, for example, have highly successful waste minimization and reduction programs. If it would be helpful to this committee, we would be happy to share these results with you at some later time.

We feel that it is important for committee members to recognize that these types of programs have been successful due to substantial commitment on the part of the NEDA membership. An additional component of the successful programs is the establishment of a data base. This established data base has proven to be a key element for the realistic waste reduction programs in existence to be realized. It is this concept that we feel should be incorporated into S. 2773.

We would like to suggest at a minimum the following two other refinements to the proposed legislation, which we believe will spur more innovative and cost-effective waste management programs in American communities and industries. As previously stated, we are supportive of an integrated waste management approach, one that recognizes the four options to deal with waste: reduction, recycling, treatment, and disposal. We believe that industry can lead the way in developing solutions with the appropriate combination of these options based on experience, technical expertise, and in some cases, existing programs. Appropriate technologies and regional needs should be included for planning appropriate and achievable regional goals.

Secondly, the bill provides for State and regional planning, and the NEDA RCRA project supports these. We would like to see other provisions included in the planning process. Specifically, these would include provisions for technology exchange, educational elements, and cost and economic factors. We strongly believe that these are necessary before instituting specific plans which could result in unattainable goals. In addition, we believe that a clearinghouse, as proposed in Section 304 of the bill, is needed to compile the critical data and information about State management, technical and operational approaches to waste management, reduction, recycling, treatment and disposal.

Industry, as a leader in the management of waste, has the technology, the expertise, and the willingness to work with the local, State, and Federal offices to initiate, to support, and to implement an integrated approach to waste management needs. To do so, we advocate a vehicle which allows for information exchange in order to establish the most cost-effective and efficient ways to deal with the waste management problem.

In the last two decades, the Nation has made major strides in solving many environmental problems. The resources that the members of the NEDA RCRA project have to offer have expanded, and the commitment is more healthful and is to a cleaner environment. That commitment will continue to grow stronger. We welcome the opportunity to discuss some specific ideas in more detail at a convenient time.

The NEDA RCRA project wishes to work with members of this committee and others in this RCRA reauthorization in order to ensure that sections of this bill are dealt with appropriately in order to reach the realistic goal of protecting health, the environment, and the economy. Thank you.

Senator BAUCUS. Thank you, Ms. deLacy.

Our final witness is David Boltz. Will you proceed, Mr. Boltz?

STATEMENT OF DAVID BOLTZ, AMERICAN IRON AND STEEL INSTITUTE

Mr. BOLTZ. Thank you, Mr. Chairman.

My name is David Boltz. I am Manager of Environmental Regulatory Affairs-Waste Management in the Environmental Affairs Department of Bethlehem Steel Corporation. I am here today on behalf of the American Iron and Steel Institute, a trade association representing the iron and steel industry in the United States. In my remarks today I will summarize the key points in our written testimony.

AISI strongly supports the Congressional intent of S. 2773, the Waste Minimization and Control Act of 1988. AISI agrees with the proposed national policy that the Nation should give highest priority to source reduction and then, in decreasing order, to recycling, to material and energy recovery, to waste treatment, and to disposal of waste, so as to minimize the present and future threat to human health and the environment.

The steel industry is proud of its strong history of recycling. One of the major raw materials in steelmaking is steel scrap. Waste minimization and waste recycling operations have increased the competitiveness of our industry and have also reduced our waste disposal problems.

Under the present Resource Conservation and Recovery Act, EPA's regulatory emphasis and industry's compliance activities have largely been devoted to hazardous wastes. AISI believes that it is timely that the Congress now turn its attention to the problems of solid waste not classified as hazardous and to the general minimization of wastes and recycling as a partial solution to the solid waste problem.

The steel industry has already instituted one program in this direction. A number of steel companies have recently created a new association, the Steel Can Recycling Institute, dedicated to the development and promotion of a comprehensive program for the recycling of post-consumer steel food and beverage can scrap. Members of AISI are committed to accepting and using recyclable steel cans as a raw material in steel production. Members of SCRI are already recycling steel cans at their plants in 19 strategic locations. Thus, we believe that the steel industry is today moving toward the goals of S. 2773.

Section 4010(a) would prohibit the storage, treatment, or disposal of solid waste without a State or Federal permit. Existing solid waste facilities will be treated as having a permit if information required pursuant to Section 4011(a) is submitted within one year of enactment, demonstrating that the facility is not releasing hazardous substances into the environment or is controlling such releases through a section 3004 corrective action program. It appears that the intent of this section is to provide a mechanism similar to the interim status provision in subtitle C, whereby existing units can continue to operate pending regulatory agency review of their permit applications.

We do not disagree with the bill's intent of incorporating existing storage, treatment, and disposal units into a regulatory system pending completion of State or Federal permitting. However, we strongly recommend that a system similar to the interim status provision in RCRA 3005(e) be established in lieu of the essentially impossible "no-release" demonstration.

Section 4011(h)(1) would force the shut-down of all surface impoundments four years after the date of enactment if such surface impoundments do not meet the minimum technological requirements of Section 3004(o)(1)(A). While this requirement may be appropriate for some surface impoundments, depending on the nature of the wastes contained therein, it should not be universally applicable. For example, it should not apply to surface impoundments which are associated with NPDES-permitted outfalls, since such impoundments are used primarily as equalization basins for treated wastewaters. As a minimum alternative, we recommend that an owner/operator be allowed to demonstrate that a particular surface impoundment, although it may not meet section 3004(o)(1)(A) standards, does not present any current or potential threat to human health or the environment.

AISI supports the position expressed in title III that waste reduction and recycling goals be set and that efficiency standards be set on the discharge of hazardous substances. AISI can not agree, however, with the national performance efficiency standards proposed by Section 5001(a)(1) of the Act, nor the efficiency standards for hazardous substances proposed by Section 5005(a).

AISI recommends that, rather than specify a single statutory efficiency standard, EPA first carry out the analysis required under proposed Section 5005(a)(5), in which the Administrator shall study and report on waste efficiency rates by manufacturing categories and processes. The administrator would then estimate the efficiency levels that each industry can reasonably be expected to achieve. Then and only then should such standards be developed on an industry-specific basis.

Section 5007 would charter and organize a National Packaging Institute. AISI believes this to be a very sound idea and encourages the Congress to establish such an Institute, one of whose goals would be to maximize recycling and reuse of packaging material. AISI would be glad to work with the National Packaging Institute in the establishment of national packaging standards.

Section 6005(a) would require the Administrator to promulgate final procurement guidelines requiring the use of, among other things, recycled steel from discarded cans. Section 6005(b), a "hammer" provision to ensure that the guidelines mentioned in 6005(a) are developed, would require that if these guidelines are not issued in a timely fashion, Federal agencies would be required to purchase paper, plastic, steel, glass, and aluminum containing a minimum of 50 percent recycled content. With respect to steel, we believe that this provision is completely unreasonable. All steel contains a high proportion of recycled material. However, the process of making steel from basic raw materials, that is, iron ore, inherently cannot use as much as 50 percent recyclable material. Therefore, such a requirement would limit all government purchases of steel to steel produced in electric arc furnaces. This would distort the market place for steel and would impose restrictions not only on the basic steel industry, but on the industries which supply it with raw materials, without in any way increasing the incentives to recycle steel products, including cans. Accordingly, we recommend against the adoption of the hammer provision.

We appreciate this opportunity to present our viewpoints on this proposed legislation. Thank you.

Senator BAUCUS. Thank you very much, Mr. Boltz.

I would like to ask you a question, Mr. O'Keefe. To some extent the same question applies to Mr. Boltz. Both of you indicate that you agree with the intent of the bill, but you also indicate some problems. The question is: do you think that we should proceed and work out these problems? Are we going down the right track? Or, do you think that because of the problems that it is a bad bill and we should stop it?

Mr. O'KEEFE. I think that the intent of finding a way to set goals that are realistic is a laudable one.

Senator BAUCUS. What about the minimization standard here? You pointed out some problems with it, and I agree that we may have to make some adjustments, but still, don't you think that it is good to try to find a way to make this bill work, even with that standard?

Mr. O'KEEFE. I was going to say that, Senator. However, rather than a national standard, I think that it may be appropriate to look at standards for individual industries. I believe that you should to take into account the differences among States. What an industry or group of industries within the State of New Jersey can do may be a lot different than what can be done by the industries in the State of Montana for example. I think that the nature of the wastes, the degree of hazard they pose, the industries and the technologies that are available to them, and the consequences of regulation all have to be taken into account. It is also important to look at what industry is already doing. In my own industry, at the request of EPA, we did a very quick survey and sent EPA information on programs that were already initiated by a number of our members. Some of those programs reflected very significant goals and the companies have been making good progress. Taking all of this into account in trying to find a process that is challenging but not unrealistic is a good step for the legislative effort that you have underway.

Senator BAUCUS. All right. Mr. Boltz, what is your response?

Mr. BOLTZ. We operate in a number of States that have some very strict regulations on the disposal or the overall management of non-hazardous solid waste. We are not opposed to a uniform system throughout the country that would bring all States up to certain minimum levels.

With regard to waste minimization, I think that our main concern is that we are afraid of the imposition early on in the process of the five percent goal. It may well be appropriate for a number of industries or a number of processes within a given industry, but in our experience just recently with the SARA 313 reporting, we were able to quantify some of the releases of hazardous substances and we are getting a lot of basic experience now with the SARA program, and I think that we will be getting more experience in future years as we refine those calculations and move on to try to minimize our releases of hazardous substances. As that process goes on and as the EPA develops its definitions and program further, I think that we can all learn in the process to have a timeframe—10 years perhaps—to get to a certain goal, whatever that goal might be, tailored to the particular industry. I think that is workable.

Senator BAUCUS. Do you think that an overall five percent standard is a good one?

Mr. BOLTZ. I did not say that.

Senator BAUCUS. I know—I am asking.

Mr. BOLTZ. I just do not know what the right number might be.

Senator BAUCUS. Well, let me ask this: do you think that it is a good idea to set a specific number like that in order to help us move more in this direction?

Mr. BOLTZ. At some point, perhaps five years down the road, it would be good to set a number like that, in order that we might have a goal to try to reach, but I do not believe that we can set that number today.

Senator BAUCUS. This world is run by deadlines and it is human nature to procrastinate. We do not like to do something until we know that we have to do it. One example is our Federal budget deficit—we Americans would just like to sweep that under the rug for awhile—it is just an American phenomenon, not so much Congress or the President. We are just all in this boat together. We are all guilty of it— each of us, as American citizens. I just believe that if we can set some guidelines and some specific numbers, maybe a little earlier, then we are more likely to move than if we do not.

Mr. BOLTZ. I think that we can see that happening in the land disposal ban that Congress enacted in RCRA. It has forced a lot of us into taking a hard look at the way in which we are disposing of hazardous wastes. We are engaged in processes that can detoxify the wastes prior to putting them on the land.

Senator BAUCUS. What does Japan do about minimization, source reduction, et cetera? Japan has had a more efficient steel production process than we have had in this country, as a general rule. What do they do with waste minimization, recycling, and waste disposal in Japan?

Mr. BOLTZ. I have no direct experience with the Japanese steelmaking processes and their philosophy. I could research that for you and provide that information at a later date, but I can not answer the question right now.

Senator BAUCUS. If you could, I would appreciate that.

[The information requested has been supplied and is retained in committee files.]

Senator BAUCUS. Mr. Denison, you went somewhat in the other direction, suggesting that five percent be used as a ceiling or that in some areas we could go further than five percent. Do you have any incentives that you could suggest to States to try to go farther than five percent? Shouldn't there be some incentives?

Mr. DENISON. Yes, I think that the down-side of setting specific limits is obviously that they may be viewed as ceilings, and a long time-frame of the sort that is laid out in the bill may be viewed as delaying or postponing any action for a period of time in cases where better progress beyond such a goal could be made. I think that the principle that is important in both the hazardous and solid waste goals in this bill is that there needs to be some accountability in two respects.

One is that we need to have the information necessary to know where we are today in terms of reduction and recycling, and secondly, to provide a bench-mark, a base-line, from which to measure progress. We also need accountability in actually ensuring that the progress takes place. I think the need for intermediate benchmarks in meeting both of these goals is critical. In terms of incentives on the solid waste side, I think that one of the incentives I would encourage is that the grants program that is laid out in the bill serve an incentive or reward function. That is, that States for example, whose State plans aggressively pursue these recycling goals and make substantial progress toward achieving or even exceeding those goals receive perhaps more than their otherwise proportionate share of that grant money. Similarly, that could serve a seed-function in encouraging innovative approaches to waste management or state-of-the-art, cutting-edge technology such as anaerobic digestion and waste processing technologies. The Federal monies could serve as an incentive directly in that respect.

Senator BAUCUS. What about giving States a bonus of some kind if they achieve a higher standard or higher goal?

Mr. DENISON. Yes, I think that there should be the ability to reward States that do take an aggressive stance. For example, there is a precedent for this in New Jersey, where a surcharge is applied to the State's landfills. It is allocated to counties within that State on the basis the recycling rates that they have achieved. I think that principle could be applied to the grants program that is discussed in the legislation.

Senator BAUCUS. Mr. O'Keefe, you suggested that we set minimization standards perhaps on a State-by-State basis. How far do you think we should go down that road?

Mr. O'KEEFE. Let me clarify that suggestion. I was trying to make the point that it is important to look at different States and what they can do given the collection of industries taht operate within their borders. Dr. Denison just made the point that we need to know where we are—that suggests that there is a lot more information that is needed. I believe that there have to be goals that are challenging, but it also is important to avoid what has become the all too familiar pattern of setting standards that are not achievable and then blaming the regulators or blaming the States and then writing tighter standards which are even more difficult to achieve.

We have offices in 34 States, and our State people tell us that State and local officials are working very hard. They are challenged now and they are having a hard time meeting existing regulations. It is important to find out why. I do not believe that it is a lack of commitment or a lack of competence. If you go into different States and offer rewards or bonuses for waste reduction, some States may be able to do a lot very easily because of the nature of the industries in those States, while other States can not because of the characteristics of their industries. The extractive industries are a good example. I do not think that those States ought to be discriminated against on that basis—that is the point I was trying to make.

Senator BAUCUS. I understand that. I was making a slightly different point, which is that the more States regulate on a State-by-State basis of waste minimization standards, the more we are going to have of much differing regulation in the different parts of the country, unless we have some kind of a Federal minimum standard.

Mr. O'KEEFE. That is not necessarily bad, is it, if it accomplishes the result? Some of those companies have found that different refineries differ in their potential for achieving reductions. They are all part of the same company, but are different facilities with different capabilities. A State is just a larger aggregation.

Senator BAUCUS. It is a question of balance. It goes to the question of Federalism. We are not 50 separate nations—we are 50 separate States within the Nation. Our National Motto is "E Pluribus Unum." That is, several among one. We are just trying to find that balance between Federal standards and local or State control. That is what we are trying to do in this bill—give the States the primary authority to set up the regulatory framework, but with some Federal minimums. Otherwise I think that any other approach would produce less desirable results.

Do any of the other witnesses have any comments or points you want to make at this time. I also often allow witnesses to respond to any statements that may have been made that you might consider outrageous. Any other comments?

[No response.]

Senator BAUCUS. All right. Thank you all very much for your time and attention today.

The hearing is adjourned.

[Whereupon, at 11:48 a.m., the subcommittee was adjourned, to reconvene at the call of the Chair.]

[Statements submitted for the record follow:]

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TESTIMONY OF
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BEFORE THE
HAZARDOUS WASTE AND TOXIC SUBSTANCES SUBCOMMITTEE
OF THE
SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE

September 26, 1988

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I. INTRODUCTION

The Natural Resources Defense Council, Inc. (NRDC), a non-profit environmental organization with over 85,000 members and contributors nationwide, appreciates this opportunity to testify before the Hazardous Waste and Toxic Substances Subcommittee. NRDC actively worked for passage of the 1984 amendments to the Resource Conservation and Recovery Act (RCRA) and has closely monitored implementation of the amendments by EPA.

Although the 1984 RCRA amendments made major improvements in the statutory scheme for managing hazardous wastes, a number of significant problems were not addressed. In particular, the amendments made few improvements in the Subtitle D system for controlling the risks posed by disposal and treatment of billions of tons of solid wastes. These include municipal waste and so-called industrial "non-hazardous" wastes, as well as a variety of toxic "Bevill wastes", such as wastes generated by oil and gas and mining activities. In addition, the 1984 amendments merely paid lip service to the all-important concept of waste reduction and did not provide an enforceable mechanism to ensure that dramatic reductions in solid and hazardous waste generation actually take place in the foreseeable future.

The RCRA reauthorization bill introduced by Senator Baucus, S. 2773, finally brings much needed attention to many of the major deficiencies of RCRA Subtitle D and proposes a number of changes that would substantially improve our ability to protect human health and the environment. Equally important, the innovative waste reduction provisions of the bill could make groundbreaking strides towards dramatic reductions in solid and hazardous waste generation, thereby reducing the size of the waste load that must be treated or disposed. NRDC strongly supports the efforts of Senator Baucus and the Subcommittee to initiate much needed reforms in our waste management system.

Despite the many improvements that S. 2773 would make in RCRA, however, NRDC believes that stronger measures will be needed to ensure safe management of so-called Subtitle D wastes. As described in detail below, many of these wastes are or may be hazardous and must be evaluated and brought expeditiously into the Subtitle C hazardous waste management system. In addition, EPA must establish uniform, national standards for Subtitle D facilities managing oil and gas, mining, and industrial wastes, rather than allowing site-specific standards to be set by states.

Despite these reservations, we are very pleased with the direction of the bill and look forward to working with the Committee as it further considers RCRA reauthorization. Our specific comments on the bill follow.

II. Goal Statement

The bill would amend the national policy statement in section 1003(b) of RCRA to set forth the waste management hierarchy with specificity. NRDC supports such a direct articulation of the hierarchy as national policy, but is concerned that certain important policy directions currently articulated in RCRA be restated in the amended version to avoid any suggestion of Congressional intent to withdraw or retreat from such directions. Specifically, the current national policy statement declares that "[w]herever feasible, the generation of hazardous waste is to be reduced or eliminated as expeditiously as possible." This policy should be explicitly preserved by rephrasing the first clause in the priority statement as follows: "first to source reduction, wherever feasible and as expeditiously as possible". We further suggest that the second clause be amended to emphasize that recycling is to be maximized, as follows: "second, to recycling to the maximum extent consistent with market demand for recycled materials". In light of this recommendation, we further suggest that the second sentence be revised as follows: "Congress further establishes as a national goal the creation and strengthening of market for recycled material."

The bill adds a new waste management approach, material and energy recovery, to the hierarchy. We support this clarification of the distinction between recycling and recovery of materials provision, because the economics of landfilling continues to make it the disposal practice of choice in many states. We also question whether the environmental conditions often cited as a justification for continued landfilling can be relied upon to protect groundwater against future contamination as effectively has some have argued. If the wasteful character of our nation's use and disposal of raw materials and manufactured products is to be changed, as we believe it must, then all states should be required to adopt the waste management hierarchy and its associated goals as set forth in the proposed amendment to section 1003(b). Allowing the states to depart from the national policy at their discretion on economic or environmental grounds will greatly undercut achievement of the waste reduction and recycling goals this legislation seeks to achieve.

III. Source Reduction and Recycling

The nation faces a waste crisis of major proportions. Large volumes of toxic substances continue to be released to the environment, despite the existing "end-of-pipe" federal regulatory scheme which imposes controls on treatment and disposal of wastes. These releases present serious threats to human health and the environment. They also represent a major cost, both to society as a whole and to the waste generating industries.

and energy from wastes, a distinction which has been blurred by EPA's implementation of the existing statute. However, we remain concerned that, based on EPA's past practice, the preference afforded this waste management approach over treatment and land disposal may result in lower pollution control standards for the burning of hazardous wastes in boilers and furnaces. It is also important that materials and energy recovery not be used as a justification for sham recycling practices. To avoid these undesirable outcomes, we urge the Subcommittee to ensure in the legislative history that the intent of the provision is to encourage only legitimate material and energy recovery.

Finally, we recommend that the fifth waste management approach, land disposal, be characterized in the policy statement as a last resort. Thus, the final clause of section 1003(b) should be amended as follows: "fifth, to contained disposal as a last resort, so as to minimize the present and future threat to health and the environment."

For the goals implicit in the waste management hierarchy to be achieved, the states and EPA must follow the priorities established in section 1003(b) in permitting waste management facilities. Yet, in directing the states to establish a waste management hierarchy in their plans "based on the state's environmental and economic conditions consistent with the waste reduction and recycling goals pursuant to section 1003(b)...", the bill would in effect encourage states to deviate from the national policy in developing their plans. NRDC opposes this

A. The Need For Source Reduction And Recycling Legislation

It has been estimated that up to 1 billion tons of RCRA-hazardous waste are being generated annually. About 520 million tons of these wastes are eventually discharged to surface waters or publicly owned treatment works (POTWs), together with 30 million pounds of "priority pollutants". Many more billions of tons of "Subtitle D" and exempt wastes that have not been regulated as hazardous despite their toxicity, are also being generated. In addition, nearly 10 million tons a year of volatile organic compounds (VOC's), many of which are hazardous, are emitted to air.

These releases present serious threats to human health and the environment. Widespread land disposal has caused substantial groundwater contamination and air pollution. Air emissions from industrial operations or waste treatment processes, such as incineration, are considered a major route of exposure to carcinogens and other toxic pollutants. Workplace exposure to chemicals is estimated to cause 5-40% of all cancers. Of the ten leading work-related diseases and injuries, at least half are associated with exposure to chemicals.

The societal costs associated with the generation and release of hazardous substances are substantial. They include health care costs and costs associated with reduced worker productivity. Costs to industry are also very high: operating pollution abatement equipment costs the manufacturing sector 11.7 billion dollars in 1985 alone. U.S. Congress' Office of

Technology Assessment (OTA) has estimated that it may cost up to 100 billion dollars to clean up as many as 10,000 old hazardous dump sites, the legacy of widespread improper waste management practices in the past.

The present regulatory system, which is based primarily on end-of-pipe controls, has achieved some substantial reductions in hazardous releases to the environment. Yet, too often these controls have only led to a shell game, where releases of pollutants to one environmental medium have been restricted at the cost of their being released to another.[1]

Deficiencies in existing programs have exacerbated community concerns regarding the safety of waste-disposal and treatment facilities, and have fueled the "NIMBY" syndrome. Communities across the country are increasingly demanding that industry and government demonstrate their commitment to substantially reducing waste before building new facilities to manage these wastes.

It is imperative that we stem the rising tide of waste generation. To accomplish this goal, we believe that strong measures are needed now at the "front end" of industrial processes to prevent hazardous substances from being generated and released. Despite the lip service paid to the principle of source reduction and recycling by RCRA,[2] no federal law presently ensures that these will take place both on a multi-media basis and on a scale commensurate with the large quantities of hazardous and other toxic waste being generated and released by industry.

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[1] For instance, in its 1984 survey of RCRA hazardous waste generation by its members, CMA reported that nearly 15 percent of the hazardous solid waste generated came from waste water treatment.

[2] RCRA §§ 1003(b), 3002(b)(1) and 3005(h)(1).

We believe that substantial source reduction and recycling will not take place until a comprehensive, federal, multi-media source reduction and recycling program is enacted by Congress. We strongly support the innovative and aggressive source reduction and recycling provisions of S. 2773, which we believe are likely to bring about substantial reductions in hazardous waste generation - 65% in 10 years.

B. Barriers To Source Reduction and Recycling

It is now well recognized that the major barriers to source reduction and recycling are not technological. Many effective and currently available techniques for source reduction (including process changes, better operating practices, and product reformulation), as well as recycling, have been documented by government and private entities.

A major barrier to source reduction and recycling is the present lack of an economic impetus (both from market-driven forces and from the cost of regulatory compliance) which is strong enough to induce waste generators to consistently give priority to source reduction and recycling options. The results of the waste minimization program of Ventura County, California, show this well.[3] The primary reason why many of the companies in the county took part in the program was economic: off-site disposal costs were increasing. The program was a success, in that within two to three years, it met its goal of substantially decreasing off-site disposal of hazardous wastes: the county's generators cut their off-site disposal by an impressive 70-80%.

Yet, the economic impetus for companies to decrease off-site disposal did not lead to substantial source reduction and recycling. Only about 5% of the decrease in off-site disposal was due to source reduction measures, with another 5% coming from recycling. Most of the decrease (a little over half) was due to increased on-site treatment, about another fifth came about through delisting, and a further 10% was due to volume reduction (mainly through mechanical removal of hazardous constituents from waste water streams).

Avoiding the liabilities associated with waste management has also been advanced as a strong, existing economic incentive to induce source reduction or recycling. However, OTA has shown that fear of liability has not led to much source reduction and recycling,[4] and both EPA[5] and INFORM[6] give many examples of why.

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[3] County of Ventura, Environmental Health Department, Hazardous Waste Minimization Program: Results and Case Studies, prepared for California's Department of Health Services, AB685 Grant Project Report (1988).

[4] U.S. Congress, Office of Technology Assessment, Serious Reduction of Hazardous Waste: For Pollution Prevention and Industrial Efficiency, OTA-ITE-317, (Washington, D.C.: U.S. Government Printing Office, September 1986).

Alternatives other than source reduction and recycling are available and are often preferred.

Some observers have argued that waste-end taxes or fees, such as have been enacted by certain states, can increase industry's costs sufficiently to induce substantial source reduction and recycling. This argument is correct in theory: in the above example, if Ventura County had had a sufficiently large waste generation tax or fee in place, more source reduction and recycling would have resulted. However, in practice the use of taxes or fees as an incentive is unworkable. To be a sufficiently large incentive, taxes or fees would have to be a very high, and in the current political climate, would be difficult to enact by a legislature.

The use of sufficiently large positive economic incentives (tax relief, loans, grants, etc.) could also in theory induce substantial source reduction and recycling. Again, however, we believe that in practice these are unworkable as incentives. They are difficult to tailor as inducements for source reduction and recycling alone (as opposed to general plant improvements), could require government to provide large subsidies, and are hard to justify to the public because they are perceived as being "give-aways" to industry.

5.(...continued)
5. Versar, Inc. Waste Minimization Issues and Options, Vol. 1 prepared for Environmental Protection Agency, PB87-114357 (October 1986).

6. David J. Sarokin et al, Cutting Chemical Wastes, INFORM (1985).

Source reduction and recycling could also be encouraged economically by tightening regulations on disposal and treatment, and enforcing regulations more strictly. Complying with more stringent treatment and disposal regulations is more costly for companies, and stricter enforcement discourages companies to reduce these costs through non-compliance. Decreasing the need to treat and dispose through source reduction and recycling then becomes economically more attractive.

For instance, treatment and disposal costs for RCRA-hazardous wastes have increased, primarily because of stricter regulation. These cost increases are often pointed to as strong incentives for source reduction and recycling. However, these large treatment and disposal costs do not pertain to wastes emitted to air or discharged to water, and are mainly costs for RCRA-wastes sent off-site. As the results of Ventura County's waste minimization program strongly suggest, increasing these costs through stricter regulation could lead to many responses other than source reduction and recycling: increased treatment on-site, increased emissions to air or discharge to water, increased volume reduction (which does nothing to reduce the toxicity of a waste stream), increased delisting requests, increased export to Third-World countries, increased illegal disposal, and no doubt many others.

To really encourage only source reduction and recycling, the stringency and enforcement of all environmental regulations, and not just RCRA regulations, would have to increase. Furthermore,

more stringent regulations controlling volume reduction, and controlling delisting, and controlling exports, and controlling every other possible response other than source reduction and recycling, would also have to be promulgated. In other words, a significant body of new regulation would have to be promulgated and enforced to ensure that source reduction and recycling were the only major option left to waste generators.

Institutional barriers within industry render the already weak economic inducements for source reduction and recycle even weaker. Even where source reduction and recycling measures are economically viable, facilities may still not implement them. For instance, as documented by OTA[7] and EPA[8], source reduction and recycling measures must be implemented by production engineers. Yet, they will often resist changing their manufacturing processes as long as these are making the product satisfactorily. Production engineers often fear that changing the process will lead to poorer product quality or, worse still, will disrupt the process completely; as the saying goes, "if it ain't broke, don't fix it." The strong commitment to source reduction and recycling from the highest levels of management, which is needed to overcome this kind of resistance, simply does not exist in many companies or corporations and there is little reason to believe that it will spring up of its own accord.

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[7] U.S. Congress, Office of Technology Assessment, Serious Reduction of Hazardous Waste: For Pollution Prevention and Industrial Efficiency, OTA-ITE-317, (Washington, D.C.: U.S. Government Printing Office, September 1986).

[8] Versar, Inc. Waste Minimization Issues and Options, Vol. 1 prepared for Environmental Protection Agency, PB87-114357 (October 1986).

In our view, only a comprehensive, federally-mandated program, run by qualified states and overseen by EPA, and combining economic incentives with prescriptive elements, such as mandatory national source reduction and recycling goals, reporting, and planning, will overcome these barriers and achieve a front-end solution to our huge and growing waste problem.

C. Proposed Program Elements

For the past two and a half years, NRDC has been working to develop a model multi-media source reduction and recycling program, and to identify the program elements that will be most effective in achieving substantial source reduction and recycling. We will shortly be publishing a report describing this program, which could be implemented nationally.

Based on our research we recommend that a source reduction and recycling program contain the following elements:

- a national goal for source reduction and recycling to be implemented through a performance efficiency standard;
- reporting and data collection requirements;
- a source reduction and recycling planning requirement;
- a technical assistance program for waste generators, to be administered by states;
- financial assistance for waste generators, to be administered by states;
- stricter implementation and enforcement of existing regulations; and
- a fee system to fund some or all of the state programs, to be set by and administered by states.

Many of these elements are contained in the Baucus bill, which in our view goes further than any legislation introduced to date towards establishing a comprehensive source reduction and recycling program. Of particular importance, the bill would establish a source reduction and recycling performance efficiency standard. The bill would also help states to set up source reduction and recycling programs by making federal grant money available; would create within EPA a national clearing-house of technical information on source reduction and recycling; and would establish a high-level office within EPA to ensure that the Agency gives high priority to source reduction and recycling. We therefore believe that enactment of Title III of this bill would be a very important step in the creation of an effective, multi-media source reduction and recycling program nationwide.

1. A Mandatory Source Reduction And Recycling Performance Efficiency Standard

OTA has suggested as a national goal 10 percent a year reduction nationally for five years (equivalent to 41 percent reduction over the five-year period). We believe that at a minimum the nation should reach this goal, and should actually go beyond this. As discussed earlier, our research has convinced us that the substantial reductions required to meet higher goals will not occur of their own accord. The economic barriers, together with the institutional barriers, are simply too great.

Our research has also persuaded us that only a source reduction and recycling standard for industrial waste generators will overcome these economic and institutional barriers and lead to reductions comparable to, and greater than, those suggested by OTA. We therefore strongly support the key provision in the Baucus bill to establish a source reduction and recycling standard (§305, amending RCRA §5005(a)).

a. The Use Of A Performance Standard Based On Efficiency

We also strongly support the bill's adoption of a performance standard based on efficiency. This is the appropriate form for a source reduction and recycling standard, because hazardous waste generation is, in essence, a reflection of inefficiencies in chemicals use in industrial operations.

A performance efficiency standard also gives industry the greatest flexibility to decide which source reduction and recycling measures are technologically best suited to each manufacturing operation. Each facility is free to choose the technological response which is most suited to its situation.

A performance efficiency standard also rewards those companies which have already made their processes more efficient or have designed inherently efficient processes. These companies will have to reduce less to comply with the standard. By contrast, a performance standard which requires annual reductions by industry (a concept which has been discussed in the waste reduction arena) is inequitable, because it may easily penalize those companies which have done the most to reduce waste generation in the past.

We also strongly support the bill's adoption of a performance standard based on a measure of the efficiency with which hazardous substances are used. The bill would set a ceiling on total, multi-media releases of a hazardous substance at a facility as a fraction of the throughput of that substance at the facility (the quantity of the substance the facility manufactures, processes, or otherwise uses). Using hazardous substance throughput as the basis for measuring efficiency is the correct approach, in terms of protecting human health and the environment, since it compares the amount of a hazardous substance lost as waste (and therefore potentially able to affect human health and the environment) to the total amount of that substance which could have gone to a useful purpose.

The importance of basing efficiency measurements on hazardous substance throughput can be seen from the following statistic. When NRDC evaluated the efficiency of 1700 separate chemical uses at about 500 facilities in New Jersey's manufacturing sector, we found that almost one-third of the total amount of releases reported involved situations where most if not all of the chemicals used were thrown away. In other words, a significant number of facilities are being extremely inefficient in their use of hazardous substances.

b. The Use Of A Single Performance Efficiency Standard For All Industries In The Manufacturing Sector

We also strongly support the adoption in the bill of one performance efficiency standard for all industries in the manufacturing sector (SIC codes 20-39). The alternative, which would be to set industry-by-industry standards as has traditionally been done in other environmental programs, is very costly and resource-consuming for government, and is very slow. An example, cited by EPA itself,[9] is the cost to the Agency of developing effluent guidelines under the Clean Water Act: $300 million between 1973 and 1986, of which $15 million alone was for the organic chemicals industry. Furthermore, it has taken the Agency 15 years to develop effluent guidelines for the organic chemicals industry, which is the largest single source of water pollution. Many observers, including the National Academy of Sciences,[10] have concluded that setting waste reduction standards in this way would be even more burdensome.

We believe that one standard for all is a workable alternative to the very burdensome industry-by-industry standard-setting procedures, for the following reasons. First, the standard would not be overly stringent, and yet could still bring about substantial reduction in hazardous waste generation. Also, facilities can be given sufficient time to choose the best way for them to comply with the standard. Finally, in those relatively rare cases where technical constraints are such that compliance with the standard cannot be achieved even within a reasonable period of time, waivers from the standard can be made available.

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[9] Office of Solid Waste, U.S. Environmental Protection Agency, Report to Congress: Minimization of Hazardous Waste, (October, 1986).

[10] National Research Council, Reducing Hazardous Waste Generation: An Evaluation and a Call for Action, National Academy Press, Washington D.C. (1985).

i. The Standard Is Not Overly Stringent But Will Bring About Substantial Reduction

The 5% standard established by the bill (§305, amending RCRA §5005(a)) is achievable by waste generators. We have carefully analyzed the release and throughput data contained in the New Jersey Industrial Survey, complemented by similar data collected more recently under the state's Right-to-Know law. The Survey compiled data on approximately 1700 different uses of chemicals at about 500 facilities in the state covering all of the manufacturing sector.[11] We believe that these data are representative of industrial efficiencies in other states. Our analysis shows that a 5% standard compares favorably with present-day efficiencies of manufacturing operations. Many facilities already release from their operations less than 5% of the hazardous substances they use: in 60% of the 1700 separate chemical uses reported, this standard would already be met.

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[11] See New Jersey Department of Environmental Protection Office of Science and Research, New Jersey Industrial Survey Final Report (August 1986).

Just as importantly, a more detailed analysis of the New Jersey data use by use[12] shows that at least in the more critical uses (those where inefficiencies are generally high, and therefore where facilities would have more to do to meet the performance efficiency standard), there are always some facilities which already meet the standard. This underscores our conclusion that a 5% standard would not push most facilities anywhere near the outer reaches of technological feasibility.

While a 5% performance efficiency standard is not technologically very stringent, it will bring about substantial reductions in hazardous waste generation. Based on our analysis of New Jersey's Industrial Survey data, we have estimated that achievement of a 5% performance efficiency standard by all facilities in the manufacturing sector could bring about a 65% overall reduction in the releases of hazardous substances as waste. A major reason why such a modest performance efficiency standard can bring about so much reduction is because, as mentioned earlier, a significant number of facilities are wasting most if not all of the hazardous substances they use.

ii. The Bill Would Give The Regulated Community Ample Time To Comply With The Standard

The bill does not require immediate compliance with the performance efficiency standard. It would give industry ten years to meet the standard (§305, amending RCRA §5005(a)). Our research and discussions with experts show that ten years are ample time for the vast majority of facilities to achieve the required efficiency standard, and will give the engineering and scientific community sufficient time in which to find technological solutions for the more difficult cases.

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[12] Facilities were also asked to describe the use to which each hazardous substance was put.

It should be noted that the 65% total reduction we expect can be achieved by applying a 5% performance efficiency standard to individual generators, is equivalent to OTA's recommended goal of 10 percent reduction per year (for five years), extended over a period of ten years.[13] OTA's suggested goal was based on individual companies' estimates of how much waste reduction they could achieve with today's technologies. This reinforces our belief that a 5% performance efficiency standard, coupled with a ten-year implementation period, is not technologically stringent. With an extra five years, manufacturing facilities could use today's technologies as well as short-term improvements on these technologies to meet the 5% standard, thereby bringing about an overall reduction of 65%.

iii. Waivers From The Standard Are Available Under The Bill

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[13] U.S. Congress, Office of Technology Assessment, From Pollution to Prevention: A Progress Report on Waste Reduction -- Special Report, OTA-ITE-347, (Washington, D.C.: U.S. Government Printing Office, June 1987).

By instituting a waiver procedure (§305, amending RCRA §5005(a)(3)), the bill sets up a system that allows EPA to deal with cases where technical barriers for reducing waste from certain chemical uses are so great that facilities will not be able technically to meet the performance efficiency standard within ten years.

We suggest that the bill make it clear that waivers should be subject to change as technology advances and allows more stringent performance standards to be met. This will ensure that facilities with waivers continue to search for source reduction and recycling options that will lower their waste generation levels still further.

c. The Role Of Planning In Technical Assistance And The Waiver Procedure

We believe that planning will play an important role in any source reduction and recycling program. Facilities subject to the performance efficiency standard should be required to prepare and keep updated source reduction and recycling plans. The purpose of these plans is to show where, why, and in what quantities a facility is releasing hazardous substances from its operations, and what source reduction and recycling practices it plans to assess and eventually implement to meet the performance efficiency standard. As many have argued, going through the process of developing a plan could lead some facilities to discover and implement easy and cost-effective source reduction and recycling options which had been overlooked in the past.

We therefore support the bill's requirement that facilities subject to the performance efficiency standard prepare plans (§305, amending RCRA §5005(a)(4)). However, we believe that the bill must make it clear that the plans should not only show how facilities intend to monitor their releases and their throughput, but also how they intend to reduce their releases to meet the performance efficiency standard. The bill should also require these plans to be annually updated, to ensure that they are an up-to-date report of a facility's efforts - and success - in meeting the standard.

The plans will also play an important role in aiding the Agency in designing its technical assistance strategies and in the granting of waivers. The bill requires that within five years of enactment, EPA should report to Congress on performance efficiencies by manufacturing category or process, and should estimate the performance efficiencies that each industry can reasonably be expected to achieve in the succeeding five years (§305, amending RCRA §5005(a)(5)). EPA can use the information it gathers for this report to detect those categories of chemical uses with consistently poor performance efficiencies: these are uses which could be potential subjects for technical assistance.

Having selected out those categories of chemical uses which appear to be having the most difficulty in meeting the standard, EPA could review the relevant facility plans. Review of these plans will help EPA to focus attention on providing technical assistance to those categories of chemical use where facilities are truly having difficulty meeting the standard. This technical assistance could minimize the need for waivers later on.

In this way, six or seven years before the performance efficiency standard takes effect, EPA will be able to identify and begin providing assistance to categories of chemical uses which are furthest from achieving the performance efficiency standard. The results of its technical assistance will then also show the Agency prior to the end of the 10-year compliance period where waivers will probably be needed. Just as importantly, it will also show where granting waivers would not be justified. This will substantially reduce the burden of having to deal with frivolous or unjustified requests for waivers.

Because the bill would require EPA to evaluate performance efficiencies by manufacturing category or process, we question the need to have all facilities submit their plans to EPA (§305, amending RCRA §5005(a)(4)). Any extra benefit of having the Agency review all plans, rather than just the plans of facilities that are having difficulties meeting the standard, would be outweighed by the resource burden entailed. NRDC believes that Agency resources would be better employed if facilities kept their plans on-site, and submitted them to EPA when requested to do so.

d. Facilities' Source Reduction and Recycling Plans Should Be Made Available To The Public

We strongly recommend that the bill require facilities to make their source reduction and recycling plans available for inspection by members of the public. Access to the plans will allow local residents and public interest groups to keep informed on facilities' progress and plans in source reduction and recycling. Moreover, these reports will be valuable complements to the release reports already publicly available through the reporting requirements of Section 313 of the Superfund Amendments and Reauthorization Act (SARA).

We recognize that some plans may contain material that the facility considers to be confidential. We recommend that the same confidentiality procedures now in place for §313 reports be adopted with respect to source reduction and recycling plans.

e. The Need To Go Beyond The 5% Performance Efficiency Standard

We stress that one standard for all should only be considered as a useful starting point in industry's efforts to reduce hazardous waste generation at source or recycle. The New Jersey Industrial Survey data clearly show that there are chemical uses where a more stringent performance efficiency standard would be achievable.

We therefore strongly support provisions of the bill that, within five years of enactment, would require EPA to evaluate performance efficiencies by manufacturing category or process and estimate the performance efficiencies which each industry could reasonably be expected to achieve within the succeeding five years (§305, amending RCRA §5005(a)(5)). We strongly recommend that the bill also require EPA to use this information to begin setting more stringent performance efficiency standards for those categories of chemical uses (or even those industrial sectors) which clearly and consistently have achieved performance efficiencies below 5%.

2. Both A Source Reduction And Recycling Standard And Continuous Monitoring Are Needed

We generally support the bill's push for increased continuous monitoring. Continuous monitoring will enable facilities to more accurately ensure that they are complying with the source reduction and recycling performance efficiency standard, as well as enabling EPA to better monitor compliance.

Furthermore, one of the immediate and encouraging impacts of the reporting required by Section 313 of SARA is that it has made many facilities aware of releases of which they were ignorant or whose magnitude they had badly underestimated. This awareness has translated in some case into decisions to decrease releases to the environment. By increasing the accuracy of release estimates, continuous monitoring will help to make facilities even more aware of the need to reduce their releases in the future. It will also make the release estimates which facilities are making public more reliable, thus giving the public greater confidence in these data.

However, we question the wisdom of the provision that would allow facilities which install continuous monitoring equipment within four years of the bill's enactment (and which are in compliance with all environmental permits) to be exempt from the source reduction and recycling standard (§305, amending RCRA §5005(a)(6)). Source reduction and recycling are needed to reduce the enormous quantity of hazardous residuals being released into the environment, as well as to reduce the enormous quantity of hazardous residuals going to treatment. This need remains whether or not releases can be continuously monitored.

We therefore strongly recommend that, rather than being seen as an alternative to a source reduction and recycling standard, continuous monitoring should be considered a necessary complement to such a standard. The bill should require continuous monitoring wherever possible, while at the same time subjecting all manufacturing facilities to the source reduction and recycling performance efficiency standard.

3. Reporting Requirements

As the discussion above has shown, a very important requirement in the bill is that within five years of enactment, EPA should evaluate performance efficiencies by manufacturing category or process and should estimate performance efficiencies that each industry could reasonably be expected to achieve in the succeeding five years (§305, amending RCRA §5005(a)(5)). Yet, the bill does not address the data collection which will be necessary if EPA is to estimate the manufacturing sector's performance efficiencies and so satisfy this requirement.

We strongly recommend that the bill explicitly require EPA to collect the data it will need to estimate performance efficiencies. Specifically, we recommend that the bill require each facility subject to the performance efficiency standard to report to EPA on the amount of each hazardous substance released from its manufacturing and ancillary operations[14] and the throughput of these substances (the quantities manufactured, processed, or otherwise used). These two pieces of information will allow EPA to determine performance efficiencies for each substance at each facility.[15] EPA can use the performance efficiencies to satisfy its own reporting requirements to Congress. In addition, as discussed above, the Agency can use them to identify industrial generators who are in need of technical assistance, to winnow out unjustified waiver applications, and to designate those categories of use where a more stringent performance efficiency standard should be set. Finally, the performance efficiency estimates will also allow the

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[14] This is not to be confused with amounts released to the environment, which, for instance, are presently reported under section 313. Any on-site destructive treatment (such as incineration) would make releases to the environment lower than releases from the facility's manufacturing and ancillary operations.

[15] Performance efficiency is the ratio of releases from manufacturing and ancillary operations, to throughput.

Agency to monitor facilities' compliance with the performance efficiency standard after the 10-year compliance period is over.

We also recommend that these data-gathering requirements be made part of the reporting requirements of Section 313 of SARA. Facility-specific, chemical-specific data are already gathered through Section 313 of SARA, and the bill subjects to the performance efficiency standard those facilities which are required to report under Section 313 (§305, amending RCRA §5005(a)(1)). Finally, EPA can employ the use data already being gathered under Section 313 to evaluate performance efficiencies by categories of use. For all these reasons, these additional data collection requirements needed to calculate performance efficiencies should be added to the Section 313 reporting provisions.

4. Grants for State Source Reduction and Recycling Programs And The EPA Clearinghouse

We strongly support the provisions in the bill that help states create source reduction and recycling programs by providing federal matching grants. State-level technical assistance programs can play a valuable role in disseminating technical information on source reduction and recycling practices to companies in the state, in funding source reduction and recycling R&D, and in helping small companies with on-site technical assistance.

State programs can also play a valuable financial role, by making grants available to small companies which would not otherwise be able to gather the necessary information on promising source reduction and recycling practices.[16] We therefore recommend that the second criterion cited in the bill (§303, amending RCRA §5003(d)) should be clarified to indicate that "assistance to business" includes consideration of whether these programs make grants available to companies located in the state.

In order to further the implementation of the waste management hierarchy established in Section 1003(b), we recommend that the bill direct the Administrator to favor those state programs which give priority to source reduction over recycling. Those programs which focus most heavily on source reduction should be given priority for grants. Furthermore, to ensure that state programs encourage source reduction and recycling for waste streams entering all the environmental media, we recommend that grants be restricted to state source reduction and recycling programs which are multi-media in focus.

We also strongly support the creation within EPA of a clearinghouse of technical information on source reduction and recycling (§304). By establishing such a clearinghouse at the federal level rather than specifically funding individual

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16. We also believe that states could help small companies financially by making low-interest loans or loan guarantees available. These loan programs could be financed through federal grant-money.

clearinghouses at the state level, technical information can be more widely disseminated at a lower cost.

5. Office of Source Reduction and Recycling

OTA has made a strong case for the creation within EPA of a high-level office charged with actively promoting source reduction and recycling activities, and INFORM and others have echoed the need for a similar office at the state level. Just as an effective company source reduction and recycling program needs a strong and visible commitment from its top officers if it is to succeed, so do federal and state programs need a strong and visible commitment from the agencies implementing them if they are to be effective. We believe that the creation of a high-level source reduction and recycling office is the best way that EPA and state agencies can signal their commitment to source reduction and recycling.

EPA has recently established an Office of Pollution Prevention within the Office of Policy Planning and Information. This is certainly preferable to placing an Office of Waste Minimization within the Office of Solid Waste, as was the case until recently. Unless source reduction and recycling efforts at EPA are made independent of the existing air, water, and solid waste programs, they will almost certainly succumb to the pervasive uni-medium focus and end-of-pipe mentality that have characterized these programs. This is especially problematic at the initial stages of an office's lifetime, when it must assert itself in the face of long-standing, large, single-medium programs such as the air, water, and solid waste programs.

However, this new EPA office is not at a high enough level to give it the authority which we believe such a program needs; it is buried within OPPE. Unless the office is established at a higher level than the air, water, and solid waste programs, it is unlikely to be able to assert sufficient authority to ensure that all EPA actions actually achieve the source reduction and recycling goals of the bill.

We therefore strongly support the provision in the bill for the establishment of an office charged with source reduction and recycling within the Office of the Administrator. We believe that this position in EPA's hierarchy will give the office the authority and visibility that it will need to carry out the program which the bill would enact. Contrary to the bill's provisions (§306, amending RCRA §5006(b)), we believe that this location should be permanent. We see no other position in the Agency's hierarchy which would be as effective.

We also strongly support the provision that the Office be given sign-off authority on EPA's existing and proposed programs, policies, regulations and guidelines (§301, amending RCRA §5001(a)(4)). However, we strongly caution that EPA should not be allowed to seize on this requirement as an excuse for time-consuming reviews of its existing programs, nor as a justification for weakening them. The sooner the office is involved in other agency actions, the more likely it is that source reduction and recycling considerations will be properly factored in. We therefore suggest that Congress also strongly encourage the Administrator to ensure that the Office be involved in all agency actions at the earliest planning stages.

Finally, we strongly recommend that the bill not refer to the office as the Office of Waste Minimization. Waste minimization is a term which has caused great confusion over the last several years, due to the fact that it has often been understood to include treatment. To clarify what the mission of this office is, we suggest that it be called the Office of Source Reduction and Recycling.

D. Program Scope and Definitions

We strongly support the bill's multi-media focus. As has been stressed by OTA and many others, source reduction and recycling efforts must address all releases of toxic substances to air and water, and not merely hazardous wastes. To ensure that the bill's multi-media focus remains clear, we recommend that a statement of policy be inserted at the head of Title III of the bill stressing the multi-media character of this Act. This is especially important since the Act is part of a reauthorization of RCRA, and some readers might conclude that the bill's source reduction and recycling goals only pertain to RCRA-wastes.

We also believe very strongly that in implementing Title III of the bill, EPA should focus strictly on source reduction and recycling and should not include treatment. We therefore recommend that the term "waste reduction" used throughout Title III be replaced by the term "source reduction". "Waste reduction" has been defined very broadly in some contexts. For instance, in California, "waste reduction" is taken to mean source reduction, recycling, and treatment. "Source reduction", on the other hand, has always been understood to mean reduction at the source of the waste generation, i.e., reduction achieved through changes to production processes, which is clearly the intent of the bill.

We also strongly support the application of the performance efficiency standard to specific hazardous substances, and not merely to hazardous wastes (§305, amending RCRA §5005(a)(1)). We recommend that at a minimum, the specific toxic chemicals subject to the reporting requirements of Section 313 of SARA also be the hazardous substances initially subject to the performance efficiency standard. However, we believe that a larger universe of hazardous substances, namely those defined as such by CERCLA, should eventually be subject to the standard.

Finally, the terms "performance efficiency standard", "releases" (for the purpose of the performance efficiency standard), "throughput", "source reduction" and "recycling", all need to be carefully defined, to ensure that Title III of the bill is properly implemented. We recommend that the following considerations be taken into account in establishing these definitions.

a. Releases

For the purposes of meeting the performance efficiency standard, the term "releases" should be very clearly defined as those releases of hazardous substances from manufacturing, ancillary or recycling processes or operations at a facility, prior to any treatment of waste streams on-site. It is the reduction of these releases through source reduction and recycling that allows a facility to meet the performance efficiency standard.

b. Throughput

We support the bill's provision that the term "throughput" should be more specifically defined by regulation by EPA to fit specific families of manufacturing processes (§305, amending RCRA §5005(a)(2)). However, we believe that a general definition of the term is required, to guide EPA. We suggest that the bill define throughput as equivalent to the amounts "manufactured", "processed", or "otherwise used" as those terms are employed in Section 313 of SARA.

c. Recycling

The definition of "recycling" should stress what is already apparent from the waste management hierarchy adopted by the bill (Section 1003(b), as amended), namely that the term does not include energy recovery. This is especially critical given that the Waste Reduction and Recycling Act of 1988 is part of a RCRA reauthorization bill. The current definition of "recycling" in RCRA includes energy recovery. The bill should also define "recycling" in a way that excludes sham recycling. We suggest that it be made clear that reclamation and reuse of the hazardous substance in a waste stream must be the primary purpose of an operation for it to be considered recycling.

E. A Fee To Pay For The Program

We believe that federal and state source reduction and recycling programs, especially their technical and financial assistance elements, should be funded by a fee imposed on waste generators. Thus, the money needed to help companies trying to reduce their waste generation would come from companies generating waste and not from taxpayers, as would be the case if the money came out of general revenues.

We therefore support the concept in the bill of funding the grants program for state-level source reduction and recycling programs through a fee. We urge that the costs of setting up the technical clearing-house within EPA also be funded through the fee.

Fees could also bring about modest amounts of source reduction and recycling. While fees set at realistic levels would not induce substantial source reduction and recycling from all generators, some generators would find a fee a sufficient economic incentive to reduce at source or recycle. We believe that a fee system should capitalize on this effect. However, to do so, the fee must be levied on the amounts of hazardous substances released as waste from manufacturing or ancillary operations or, preferably, on the amounts of hazardous substances used. Only this kind of fee can translate the economic penalty of a fee into hazardous waste reduction.

We therefore recommend that the bill establish either a waste-end fee, levied on hazardous substances going to waste, or a front-end fee, levied on quantities of hazardous substances being used. Because it encourages toxics use reduction as well as source reduction and recycling, and because it is easier to administer, we recommend a front-end fee over a waste-end fee.

We stress our general support for the packaging fee which the bill would levy. However, we believe that such a fee would have a greater utility in funding elements in a solid waste program, rather than also funding hazardous waste source reduction and recycling programs.

IV. Subtitle D and Special Wastes

A huge quantity of toxic and potentially RCRA-hazardous wastes remain virtually unregulated under RCRA. According to EPA, over 160 million tons of municipal solid waste, 430 million tons of industrial nonhazardous waste, 1.4 billion tons of mining waste, as well as huge volumes of oil and gas and other, "special wastes", are generated each year in the United States.[17]

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[17] See Office of Solid Waste and Emergency Response, U.S. EPA, "Subtitle D Study; Phase I Report", Table ES-2 (1988) (hereinafter Subtitle D report).

which requires existing surface impoundments receiving, storing, or treating industrial wastes to meet RCRA §3004(o) minimum technology standards within 4 years.

Although these measures represent a significant step in the right direction, NRDC believes that further progress is needed to bring under control many billions of tons of wastes that are now contaminating groundwater and air and may cause even greater harm in the future. Our recommendations are provided in detail below.

IV. General Concerns

A. State Plans

NRDC strongly supports requiring the preparation of state solid waste management plans and permits for all solid waste management facilities, and for conditioning the authority to issue permits on the preparation of a plan. However, section 203 of the bill includes a separate, shorter schedule for the establishment of a permitting program for solid waste management facilities, supported by a "certification" to EPA by the Governor of each state regarding the adequacy of regulatory authority and personnel to implement such a permit program. We have serious concerns about the certification program for two reasons.

First, the bill does not provide for any EPA review or authorization of the state permitting program certification, nor are there any requirements for substantiation of the assertions contained in the certification. Experience with state permitting programs for oil, gas and mining wastes, for instance, as

Some of these wastes, notably certain mining and oil and gas wastes, already meet the RCRA criteria for hazardousness and many others, including industrial, infectious, oil and gas, and mining wastes, have caused, or are capable of causing, great harm to human health and the environment. Yet, to date these otherwise hazardous wastes have fallen into the great black hole known as Subtitle D because EPA, for administrative and political reasons, has chosen not to regulate them as hazardous. Relegation to Subtitle D often means nonregulation of these toxic wastes or inadequate controls that vary from state to state and are often unenforced.[18] For instance, EPA's Subtitle D report documents the fact that relatively few states have regulations for Subtitle D surface impoundments, which account for 85% of all Subtitle D facilities[19], and are notorious sources of groundwater and air pollution.

S. 2773 represents an important improvement over the status quo for these so-called "orphan wastes" because it would require EPA to establish guidelines setting minimum requirements for facilities managing Subtitle D wastes. The guidelines would then be reflected as conditions in the permits for these facilities. In particular, we applaud the inclusion of §204(h) of the bill, detailed in EPA's reports to Congress, suggests that many states have been lax in both their permitting and enforcement of state regulations governing the management of these wastes. NRDC therefore recommends that states be required to substantiate their certification with evidence that they have all of the statutory and regulatory authority necessary to carry out the new Subtitle D regulations, and possess the technical and enforcement capability and financial resources to conduct permitting, inspection, and enforcement of those regulations.

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[18] See Lisa Speer, Jane Bloom, Ned Smith, "Comments of The Natural Resources Defense Council, Inc. on EPA's Draft Report to Congress, 'Management of Wastes from Oil Exploration, Development, and Production", (October 5, 1987). (Attachment __)

[19] Subtitle D report at ES-19.

Second, it is unclear whether the state plan to be submitted for EPA approval at a later date must include the information provided in the certification, which would be subject, like the rest of the plan, to the public process set forth in section 4007 of the current law. It is also unclear how the certified permitting program relates to the permit requirement already existing in section 4005(b) of the statute, which mandates state adoption and implementation of a permit program eighteen months after EPA promulgates revised landfill criteria under section 4004(a) for facilities receiving household and small quantity generator hazardous waste.

To clarify any uncertainty about the scope and place of state permit programs in the state plans, NRDC recommends that the bill be revised to include establishment of facility permit programs as one of the minimum requirements for approval of state plans in section 4003(a). The certification process could still be used on an interim basis to get permit programs implemented sooner than revised state plans need to be submitted for EPA approval. The permit programs should, however, be subject to the same approval process as the other elements of the state plan, when that process takes place.[20]

B. Evaluation of Subtitle D Wastes for Inclusion in Subtitle C

Section 204(a) of the bill essentially establishes a presumption that Subtitle D wastes, including oil and gas, mining wastes, and industrial "non-hazardous" wastes, can be safely managed under site-specific, State-administered Subtitle D standards. EPA would not be explicitly required to assess whether these wastes meet the current criteria for RCRA-hazardousness and list those that meet the criteria. Indeed, the bill implies that these wastes will not be managed under Subtitle C, even if they are hazardous under EPA's RCRA criteria, unless EPA finds that management under Subtitle D will not adequately protect human health and the environment.

In NRDC's view. there is no justification for giving special treatment to hazardous waste generators simply because they are in the oil and gas or mining business. Wastes generated by these and other industries that meet the RCRA criteria for hazardousness should be subject to the full complement of cradle-to-grave Subtitle C standards, just as hazardous wastes generated by other industries are. We strongly urge you to require EPA to evaluate the inherent toxicity of these and other industrial wastes, assess whether they would be hazardous under the RCRA hazard criteria, and expeditiously list and regulate under Subtitle C those wastes those that meet the RCRA hazard criteria. To accomplish this, we believe that the bill should set a mandatory schedule for evaluating all industrial waste streams against the RCRA hazard criteria, as well as a schedule for actual listing decisions by the Agency. EPA's extraordinarily poor record for listing wastes strongly indicates that without a Congressionally mandated schedule, Subtitle D wastes will not be evaluated for listing in the foreseeable future.

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[20] Section 202(i) of the bill includes a technical cross-reference amendment to section 4007(a)(1). To make section 4007 completely consistent with changes contained in the bill, NRDC suggests that the cross-references in section 4007(a)(2)(A) should be similarly amended. The amendment should read as follows: "Section 4007(a)(2)(A) is amended by striking "and (5)" and inserting "(5), (6), (7) and (8)."

In addition, §204(b)(4) of the bill directs EPA to promulgate "guidelines" and to require specific design and operating measures for facilities managing Subtitle D wastes _only if_ the Agency deems these measures to be "appropriate" after "considering" a variety of factors. The specific directions to EPA with regard to each waste category, however, refer to mandatory regulations. It is therefore left unclear whether or not EPA is to establish enforceable regulations. In addition, the Agency is apparently given broad discretion to omit from its guidelines, some or even all of the design and operating measures specified in the bill. We believe that EPA should be required to promulgate enforceable regulations setting forth the design and operating standards for facilities managing each of the solid waste categories identified. These regulations should include requirements for all of the design and operating measures specified, unless the finding is made that such measures are not needed to protect human health and the environment. The bill should be clarified to this effect.

V. Concerns About Specific Waste Categories

A. Permit Conditions for Municipal Waste Facilities

NRDC agrees with the list of minimum requirements for provisions to be included in permits, as set forth in section 203 of the bill. We also strongly urge the inclusion of waste reduction and recycling programs as conditions of landfill permits, and ash management plans in addition to the latter as conditions of incinerator permits. NRDC is advocating the inclusion of such provisions as part of the reauthorization of the Clean Air Act. Our views on these issue as well as our concerns about the specifics of incinerator emission standards and ash management requirements have been expressed and are known to the Committee, and we are actively working right now with Committee staff to address those concerns and to develop substantive provisions that we can support for enactment this year. We would prefer to see these issues resolved and passed this year in the Clean Air Act, and are working to achieve that end.

Our objective is expeditious passage of substantively sufficient provisions addressing the environmental and public health risks posed by municipal incinerator emissions and improper ash management. The vehicle for accomplishing this objective is of secondary concern, and at the present time, the Clean Air Act is further along in the legislative process and still has a prospect of passage in this session. Because the issues have moved several drafts beyond the provisions contained in this bill, we will not address them here. However, because RCRA reauthorization may ultimately be the forum in which these issues are resolved, it is important that this bill be improved to reflect the agreements on acceptable provisions which are in the process of being reached in the context of the Clean Air Act reauthorization. NRDC staff are available and willing to provide the Subcommittee with any additional assistance on these issues that you may request.

B. Municipal Solid Waste Landfills

NRDC welcomes the inclusion of specific requirements for municipal solid waste landfills. These landfills have been shown to pose comparable hazards to the environment as hazardous waste landfills, but have not heretofore been required to meet federal standards to protect the environment and public health. Although EPA has recently proposed revised criteria for such facilities pursuant to the 1984 amendments to the statute,[21] the EPA proposals do not go far enough to establish uniform minimum federal standards that will assure that existing and new municipal landfills do not continue to become candidates for inclusion on the National Priorities List for cleanup under Superfund. At the present time, approximately 20 percent of the sites on the NPL are municipal landfills, and an additional 2000 municipal landfills have been identified by EPA as satisfying the criteria for listing. Although a small number of states have moved to impose environmentally protective design and operating requirements on municipal landfills, EPA's recent proposal has many shortcomings. If regulations must in fact be promulgated under new section 4011 of the statute, which, as mentioned earlier, is unclear, the provisions set forth in section 4011(c)(1) would go far to remedy the shortcomings in the proposed landfill criteria.

While we are generally pleased with the proposed requirements, we would like to see the following strengthening additions:

- siting requirements in section 4011(b)(4)(A) for all solid waste categories should include proximity to surface water as well as to vulnerable or unmonitorable groundwater;

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[21] Environmental Protection Agency, Solid Waste Disposal Facility Criteria; Proposed Rule, 53 Fed. Reg. 33314 (Aug. 30, 1988).

- design requirements under section 4011(b)(4)(D) should include gas collection systems for landfills in addition to liners, leachate collection systems and cover requirements;

- for municipal solid waste landfills in particular, section 4011(c)(1)(I) of the bill would authorize variances from groundwater monitoring requirements on certain conditions involving a demonstration that "there is no potential for migration of hazardous constituents from the landfill to the uppermost aquifer." NRDC opposes this provision because EPA has repeatedly interpreted the words "no migration" to allow migration found to be "acceptable" to the agency or to state authorities. To avoid repetition of this practice, NRDC suggests as an alternative that the bill authorize reductions in the frequency of required groundwater monitoring in cases where a qualified geologist or geotechnical engineer certifies that there is no potential for migration to occur.

- liners in new landfills and expansions of existing facilities should be capable of preventing migration of wastes or leachate during the post-closure period, and not merely during the active life of the facility, as the bill currently provides. NRDC therefore suggests that section 4011(c)(2)(A) be amended to insert after "facility" the phrase "and the post-closure period."

- Section 4011(c)(2)(D) lists a series of prohibited locations for the siting of new or expanded existing municipal solid waste landfills, unless certain specified conditions are met. NRDC believes that some locations are simply unsuitable for the siting of waste landfills, and these include wetlands, unstable areas, seismic impact zones, and areas adjacent to public and private drinking water sources, surface water, and habitable dwellings. We urge that the provisions allowing the siting of landfills in such areas be deleted from the bill, and that the adjacent areas listed above be included in the category of prohibited locations. We also suggest that EPA be further directed to require that minimum distances between the base of a facility and the groundwater table be established.[22]

Although the bill contains no provision to this effect, NRDC strongly recommends the addition of a requirement for the phasing out of existing facilities located in prohibited locations on as expeditious a schedule as possible. Facilities located in such areas pose particularly great risks to the environment and public health, and should be phased out of active use on a high priority basis.

C. Medical Waste

This past summer we experienced at beaches along the East Coast and the Great Lakes and on a larger scale than ever before the unpleasant realities attributable to major shortcomings in the management of medical waste. Beach contamination is only part of a much larger problem, which includes the less visible but equally serious risks posed by the three principal disposal practices for medical waste: incineration, landfilling, and sewage disposal. These practices are not now governed by comprehensive and environmentally protective federal or state requirements. Of particular concern to this Subcommittee, there is no federal program to ensure the proper packaging, labeling, treatment, transportation, tracking or disposal of medical waste.

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[22] The states of Pennsylvania and New York have proposed or promulgated such minimum distance requirements of 8 and 10 feet, respectively, in state landfill regulations.

NRDC has reviewed the provisions of this bill dealing with infectious waste, and we do not support controlling the management of this waste under Subtitle D of RCRA. We believe that infectious waste is a hazardous waste. We believe further that it is a subcategory of a larger category of medical waste, and that the larger category should be listed and regulated as a hazardous waste under Subtitle C. Not only do infectious wastes pose a risk of serious harm to public health, but medical materials, such as needles and glass vials, can pose physical dangers to the public, while chemotherapeutic agents are extremely toxic. Medical wastes also pose a serious threat to the environment, as was demonstrated repeatedly this summer in the fouling of our beaches and coastal waterways. In addition, the technologies used to treat medical wastes, such as incineration and autoclaving, are in urgent need of uniform operating and emission standards to ensure that toxic combustion products are not generated and emitted, and that pathogenic organisms are destroyed. Finally, despite the documented evidence that large volumes of sewage pass untreated into the nation's waterways on a regular basis, it continues to this day to be recommended by the Centers for Disease Control and various state health departments that certain medical wastes, such as blood products and dialysis wastes, be disposed into sewers. This practice should be universally prohibited until it is clear that all sewage passes through at least secondary treatment before being discharged into our waterways.

NRDC believes that the nation is experiencing a crisis in the management of medical wastes, and that a waste management system is currently in place under Subtitle C that would remedy all of the shortcomings that have been identified in the handling of medical waste. We therefore recommend that EPA be directed to list as a hazardous waste under Subtitle C an expanded category of medical waste that would include infectious waste as defined in the bill as well as all other medical waste which poses risks to health or the environment. In our view, the measures which would establish demonstration programs to track the movement of infectious wastes in a small number of states are not a substitute for a comprehensive program to regulate the management of medical wastes from cradle to grave.

D. Oil and Gas and Mining Wastes

We also have concerns about the specific regulations mandated for oil and gas and mining wastes. Under §204 EPA is directed to require application of best available control technology ("BACT") to mining and oil and gas waste operations.

However, BACT is explicitly to be determined on a site-specific basis by the State or Administrator with respect to mining wastes; this is implicitly required for oil and gas wastes as well. In our view, these provisions could be interpreted to simply re-codify the Bevill amendment for these wastes, since at present States establish the rules for these operations, on a site-by-site basis. Many of these wastes have been found by EPA to pose threats to human health and the environment as presently managed. What is needed for these wastes is a set of nationally applicable standards which define BACT and which States are free to exceed. Site-specific standards are clearly the antithesis of such minimum, uniform standards. Thus we believe that EPA, not the States, should establish BACT in its regulations for facilities managing these wastes.

VI. Exports of Solid Waste

We strongly support the idea of prohibiting exports of solid and hazardous waste to foreign countries, as incorporated, in part, in §206 of the bill. As federal and State laws and regulations controlling disposal and treatment of hazardous or other toxic waste become more stringent, and siting of new waste management and treatment facilities more controversial, American companies are seeking other, cheaper avenues for dumping their waste. According to a 1988 report by the EPA Inspector General, over 450 shipments of hazardous waste were exported from the U.S.

last year.[23] This represents a dramatic increase in such exports prior to enactment of the 1984 RCRA amendments. Although much of the waste exported from the U.S. is presently going to Canada, there have been an increasing number of proposals to send wastes to developing countries. These countries typically have neither the infrastructure, resources, nor the enforcement mechanisms to safely manage these wastes.

Not surprisingly, much of this toxic trade has been illicit. According to EPA, many shipments of waste exports have left U.S. shores in violation of RCRA §3017's notification and prior consent requirements.[24] Moreover, existing RCRA requirements do not cover a variety of toxic wastes, such as incinerator ash, which have not been listed as RCRA-hazardous, nor do the export provisions of RCRA actually bar U.S. companies from exporting wastes. For instance, 30,000 tons of Philadelphia incinerator ash legally left U.S. shores in late 1986 without obtaining the prior informed consent of the receiving countries, and portions of it were dumped in Haiti and an island near Guinea; the remainder is still at sea seeking a final resting place. Fifteen hundred gallons of hazardous waste exported from the United States sit in a phosphate mine in Zimbabwe, after being falsely labeled as cleaning fluids. And more than 100,000 gallons of toxic waste from Southern California were discovered in an open field in Tecote, Mexico in late 1985.

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[23] Office of the Inspector General, U.S. EPA, "EPA's Program to Control Exports of Hazardous Waste" (1988).

[24] Id.

This trade is immoral, contributes to our foreign debt, and embarrasses us on an international scale. The solution to our waste problem is not to send it somewhere else, but to manage it -- by reducing our waste load, properly recycling it, and effectively treating and disposing of what remains -- in our own backyard. As the country with the toughest hazardous waste laws in the world, and as the beneficiary of the products whose creation generated the waste, the U.S. should take the lead in halting exports of hazardous waste, particularly to developing countries.

NRDC therefore urges Congress to ban outright the export of hazardous and solid waste for treatment or disposal abroad. At the very least, U.S. firms should be prohibited from exporting wastes to developing countries and should not expand the waste export trade to any other country with which the U.S. does not presently have an agreement controlling such exports.

S. 2773 takes a step towards controlling waste exports by prohibiting them unless the U.S. and the receiving country enter a bilateral agreement requiring, among other things, the prior consent of the receiving country and assurance that the waste will be managed in a manner that protects human health and the environment. We do not believe, however, that the bill goes far enough towards halting waste exports. A bilateral agreement that requires the receiving country to have waste management standards which protect human health and the environment will not protect the public in those countries if the financial or technical resources to enforce and properly implement these requirements are lacking. This is invariably the case in developing countries.

Moreover, although a good concept, prior informed consent has been a failure. As EPA's Inspector General reports, the prior notice and consent provisions of RCRA are often ignored by waste export firms. Thus, merely extending these requirements to solid waste is unlikely, at best, to ensure that these countries are informed as to the toxic nature of these wastes and given the opportunity to refuse waste shipments. We urge you to champion the principle that the U.S. will manage its own waste internally and not dump it on other countries, by closing the waste export loophole in RCRA.

VII. FEDERAL ENFORCEMENT

Section 205 of the bill provides for both civil and criminal penalties for violations of statutory requirements or permit conditions. Although section 3008 of the current law draws a distinction between civil and criminal noncompliance in imposing penalties, the bill would impose the same monetary penalties for both civil and criminal violations -- $10,000 for each day of violation. Because criminal violations must be knowing and are therefore more culpable than civil noncompliance, NRDC believes that a similar distinction be drawn. In addition, the daily penalties should be increased for both types of violations. We recommend that the enforcement provisions of the bill be amended to impose civil penalties of $25,000 per day, and criminal penalties of $50,000 per day, which are the penalties currently imposed by §3008 of RCRA for noncompliance with Subtitle C requirements.

VIII. CONCLUSION

For the reasons stated above, NRDC applauds the subcommittee's efforts, reflected in S. 2773, to establish meaningful standards for solid waste facilities and to spur dramatic reductions in the amount of solid and hazardous waste that is generated and disposed. While we believe some significant changes are needed to tighten the bill, S. 2773 is a welcome and encouraging starting vehicle for RCRA reauthorization. We look forward to working with the Committee towards enactment of an improved RCRA next year.

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STATEMENT
OF THE
AMERICAN HOSPITAL ASSOCIATION
BEFORE THE
SUBCOMMITTEE ON HAZARDOUS WASTES AND TOXIC SUBSTANCES
OF THE ENVIRONMENT AND PUBLIC WORKS COMMITTEE
OF THE
U.S. SENATE
ON
THE REGULATION OF INFECTIOUS WASTE

September 26, 1988

Mr. Chairman, I am Nelson Slavik, Ph.D., President of Environmental Health Management Systems, Inc. and Chairperson of the American Society for Hospital Engineering's Environmental Safety Committee. I am pleased to testify today on behalf of the American Hospital Association, which represents more than 5,300 health care institutions and 40,000 personal members, including the members of the Engineering Society. Hospital and health care workers are very concerned about the appropriate management of infectious waste, and we welcome the opportunity to discuss this issue with you today.

Recent events, such as the floating garbage barge and the appearance of medical waste on some beaches, have highlighted the growing problems presented by solid waste disposal in the United States. Media attention has understandably focused on that waste which the public perceives as presenting the most risk -- medical waste. But infectious waste cannot be addressed outside of the context of the larger problem. The growing volume of solid waste, the diminishing number of disposal options, and the rising concern among the public clearly point to the need for a national strategy on these issues.

Mr. Chairman, AHA commends you and your colleagues on the comprehensive approach you are considering in the reauthorization and amendment of the Resource Conservation and Recovery Act (RCRA). It is imperative that any strategy adopted address both the short-term problems of handling and disposal and the long-term challenge of minimizing the amount of waste we generate. Innovation in waste disposal methods must be encouraged and your plan takes a significant step in that direction.

Although we believe that the broader problems presented by solid waste must be addressed, today we will focus our remarks primarily on the management of infectious waste, which is an important component of this subcommittee's plan. With respect to the risks posed by infectious waste, three questions need to be examined:

- What types of medical waste should appropriately be considered infectious and how should these be defined?
- What is the extent and nature of infectious waste disposal problems?
- What steps are needed to develop an effective management strategy for infectious waste?

Definition of Infectious Waste

AHA feels strongly that the lack of a clear, nationally accepted definition of infectious waste is the most significant obstacle to efficient waste management and contributes to public apprehension about the effectiveness of current practices. Without a universally accepted definition of infectious waste and the categories of waste to be subsumed under that definition, a hospital or other health care facility could classify from 5 percent to 70 percent of its waste stream as infectious, depending upon criteria used. Given that the cost of infectious waste disposal exceeds that of general municipal waste up to 50-fold, the additional expense of treating wastes as infectious must be justified by evidence of the need for greater disease prevention and environmental protection.

The Environmental Protection Agency currently defines infectious waste as "waste capable of causing infectious disease." The agency correctly identifies five factors that "contribute to the risk of introduction of disease." These are:

- Presence of a pathogen;
- Sufficient virulence;
- Dose of the pathogen;
- A portal of entry; and
- Resistance of the host.

Unfortunately, most individuals equate the presence of a pathogen with infectious waste. The presence of a pathogen alone is not sufficient to represent a risk of infection. This concept is difficult for the public to grasp but is essential if risk is to be assessed accurately. All environments, except those maintained under sterile conditions, harbor some population of pathogenic microorganisms. It is important to remember that all the factors I mentioned must be present simultaneously for disease transmission to occur.

In practical terms, individuals seeking a workable definition of infectious waste generally look to specific categories or types of waste. Although this approach is more simplistic, it can result in a tendency to de-emphasize or ignore the requisite interaction of all five factors in the chain of infection.

AHA recognizes that waste categories must be used in implementing a workable waste management system. However, the adoption of differing categories by various federal and state agencies, particularly across states, has led to considerable confusion among waste generators, haulers, disposal sites and the public as to what waste is appropriately regarded as potentially infectious. We urge that a uniform classification system be adopted by all federal and state agencies, and that the system be based on a slight modification of the current definition used by the Centers for Disease Control. Specifically, we recommend that the definition of infectious waste contain, and be limited to, the following categories:

- Contaminated sharps -- Medical or laboratory articles that are potentially infectious and may cause punctures or cuts. Examples include needles, syringes, microscope sides and cover slips, intravenous tubing with needles attached, vacuum collection tubes containing blood, and glass pipettes.

- Microbiological laboratory wastes -- Cultures and stocks of infectious agents, disposable culture dishes, and devices used to transfer, innoculate and mix cultures.

- Human blood specimens and products -- Bulk blood, serum, plasma, and blood products.

- Pathological wastes -- Tissues, organs and body parts, which are discarded after surgery, autopsy, or laboratory procedures.

- Isolation wastes from rare or special cases of extremely contagious diseases. Examples of these unusual but highly communicable diseases include Lassa fever, yellow fever and Marbary virus. These diseases are known as class 4 and 5 agents in the CDC's Classification of Etiological Agents on the Basis of Hazard.

In endorsing the use of these five waste categories, we acknowledge that our rationale for doing so varies according to the degree of risk posed by each grouping. Three of these five categories -- contaminated sharps, microbiological laboratory wastes, and isolation wastes from rare, extremely contagious diseases -- represent the greatest risk of injury or transmission of infection from mismanagement or improper disposal, and strict adherence to disposal guidelines should be ensured. Items such as needles and scalpels have been associated with injury and disease transmission in occupational settings, resulting in infection with viruses such as hepatitis B or human immunodeficiency virus. This occupational risk is believed to be related to the recent contamination of sharps with sufficient quantities of pathogenic material (usually blood) and provision of a portal of entry into a host through punctures or cuts. Microbiological laboratory wastes can pose a potential risk due to the heavy concentration of biological materials and the fact that these materials are usually found in glass containers that, if broken, become contaminated sharps. Additionally, isolation wastes from certain rare diseases may pose a risk because of extreme contagion. Hospitals have always used special procedures for these unusual cases.

The two remaining categories, blood specimens and products and pathological wastes, are not associated, epidemiologically or microbiologically, with infectious disease transmission in the environment but are still perceived by the public to pose a substantial risk of harm. To remain responsive to community concerns and to acknowledge the "learning curve" that must be realized through public education, AHA believes it is necessary to continue including these categories in the definition of infectious waste. It should be stressed, however, that adherence to prudent management practices at the point of generation is sufficient to prevent disease transmission from these two categories. Although blood specimens and blood products can present an occupational hazard, particularly in the presence of sharps (a portal of entry), they do not in themselves present an environmental risk because of the fragility of viruses and other organisms away from the body. The occupational risk can be managed with appropriate workplace precautions, which have been addressed by CDC, AHA, and the Occupational Safety and Health Administration

(OSHA). Pathologic wastes generally present a hazard to the public only from an emotional or aesthetic point of view and, thus, their prudent handling and disposal is sufficient.

I have mentioned several times the different risks found in the occupational setting and the environment. These differences are sometimes difficult to understand but are central to identifying appropriate waste management practices. The recent emphasis in health care settings on the use of "universal precautions" for contact with blood and body fluids of all patients should not be allowed to confuse the issue. Although the concept of universal precautions regards blood and body fluids from all patients as potentially infectious, these precautions are designed to prevent occupational exposure of mucous membranes and non-intact skin to blood-borne diseases. As such, barrier precautions are employed in the health care setting, where the risk of such exposure is intense and frequent. Once waste is properly contained, and in the absence of gross negligence by the waste handler, two essential factors for disease transmission are no longer present -- mode of transmission and portal of entry. In addition, once blood and other fluids are away from the body, contact with air accelerates destruction of pathogens.

For these reasons, isolation wastes from patients' rooms and other waste that has had contact with body fluids or small amounts of blood (for example, surgery or dialysis waste) should not be considered infectious. Studies quantifying the microbial load associated with hospital waste from different sources, such as surgical suites or intensive care units, have found that this waste is no more contaminated with microorganisms than household waste. Indeed, a study by Kalnowski (1983) found that hospital waste was anywhere from 10 to 10,000 times less microbially contaminated than household waste.

Nature of the Problem Posed by Infectious Waste

I have spent considerable time discussing the definition of infectious waste because a thorough understanding of the real risks is essential if we are to evaluate the nature of the problem and devise an appropriate strategy for addressing it. We know that there has been no epidemiological evidence of disease transmission in the community from improper handling or disposal of hospital waste, excluding the occupational risks associated with sharps. Indeed, a recent survey of a random sample of U.S. hospitals, conducted by AHA and Dr. Bill Rutala of the University of North Carolina, confirms what we know from the scientific literature: no cases of disease transmission related to waste disposal (excluding occupational needlesticks) have been reported. Despite the lack of evidence of risk, however, we believe all generators of infectious waste should continue to take appropriate steps to maintain a safe environment.

Hospitals have been very conscientious in following recommended guidelines for infectious waste management. Eighty-five percent of our 441 survey respondents are in voluntary compliance with CDC guidelines for waste designation, handling, and disposal. In addition, the Joint Commission on Accreditation of Healthcare Organizations requires hospitals to demonstrate an effective waste management program. Indeed, in an uncertain regulatory environment, many hospitals have tended to "overmanage" their wastes. Approximately 95 percent of hospitals in our survey identified autopsy, isolation, and dialysis wastes as infectious, reflecting practices that go well beyond CDC recommendations. This variance reflects, in part, the wide disparity among jurisdictions regarding definitions of infectious wastes. The implications of this expanded waste load are significant considering that options for on-site waste disposals are shrinking, due in part to restrictions on incineration, and off-site disposal is becoming prohibitively expensive.

An Effective Waste Management Strategy

As discussed earlier, the most significant obstacle to effective waste management is the lack of uniform definitions and, thus, practices across the country. Until this conflict is resolved, it will be difficult to assure that appropriate education and monitoring are being implemented across all areas involved in waste management. To remedy this confusion, we recommend that model state regulations or minimum federal standards be developed along the lines we have discussed. Consistent guidance can go a long way toward removing obstacles to prudent waste practices. In addition, significant attention should be given to educating all parties involved in waste management.

Beyond actions to clarify the classification of infectious waste, better guidance is needed regarding the criteria for using various waste treatment methods. States have had little direction on appropriate standards for the use of incineration and other waste management options. As a result, regulation of technology has been very uneven and sometimes unnecessarily restrictive. Consistent criteria for the use of incinerators and other technologies needs to be developed that will ensure that waste is managed both properly and in a cost-effective manner. Care should be taken that the guidelines do not render incineration economically unfeasible for hospitals since this option is critical if on-site treatment is to be encouraged. Any federal regulations relating to operating standards for treatment technologies should strive to minimize additional costs and to avoid unnecessary restrictions that may further limit disposal options.

AHA does not support the implementation of a manifesting and tracking system for off-site disposal of infectious waste. Such a system would be unlikely to reduce the already small hazard to the community, would not lead to disease prevention, and would be very costly and burdensome. In addition, manifesting and tracking treated infectious waste -- which, by definition, is not significantly different in character from other solid waste -- would appear to send an erroneous message that the waste is somehow dangerous. If generators of infectious waste provide documentation that appropriate treatment has occurred, the need for tracking should be eliminated. Requiring a manifest in these circumstances could create significant new problems for generators, handlers, and regulators without recognizable benefit.

Although we do not believe manifesting represents an appropriate monitoring mechanism for infectious waste, if Congress proceeds with such requirements, we recommend that regulation be limited to interstate transportation of infectious waste. Many states do not consider infectious waste disposal to be a problem and have adequate intrastate disposal systems that would not be enhanced by a manifest program. However, we recognize that transportation of wastes over long distances may diminish local controls and, thus, states may prefer to maintain documentation on the nature and volume of waste coming from other jurisdictions.

Will the actions discussed here be adequate to prevent further breaches of proper waste disposal, such as those recently seen on the East Coast?

Although these incidents have understandably generated considerable public concern, they fortunately appear to be the rare exception rather than the norm across the country. We believe that the development of a consistent approach to infectious waste and greater education of all those involved will go a long way toward solving the problem. However, it is important to recognize that some of the most widely reported incidents last summer were linked to small outpatient clinics, which are frequently exempt from current state regulations. Consistent with our argument for the adoption of a uniform definition of infectious waste, we do not support waste designation on the basis of its source, as would be the case in allowing exemptions for "small quantity" generators. If a determination of whether infection is present is based on scientific, epidemiologic evidence, presence of a risk alone should be sufficient to require consistent management controls, regardless of the setting. Therefore, waste designated as infectious should be managed consistently across all settings, including outpatient clinics, ambulatory surgery centers, private physicians' and dentists' offices, nursing homes, hospices, and, potentially, home care settings.

The volume of waste from small-quantity generators is difficult to estimate, but the scope of the problem may be projected by even a cursory look at the number of facilities under consideration. Drawing from data collected in 1985, 13,200 freestanding laboratories, 180,000 private physicians' offices, and 98,400 private dentists' offices should observe proper infectious waste management guidelines. Approximately 2,900 outpatient clinics and 16,400 nursing homes generate medical waste, using 1986 figures. In 1987, there were approximately 650 ambulatory surgery centers and 860 freestanding dialysis centers. More than 225 blood banks not associated with a medical facility were reported in 1987. These figures do not capture all of the health care facilities and home care settings that generate medical waste, a number that is growing with the shift in emphasis to outpatient care. These facilities together represent a significant population of generators that should be observing appropriate management practices.

If small generators are to be held accountable for appropriate disposal standards, as we believe they should, it is even more imperative that cost-effective alternatives for disposal and monitoring are identified and implemented. We urge both Congress and the Administration to make this a top priority.

AHA believes that the reauthorization of RCRA represents an important opportunity to improve the handling of both infectious and other solid waste. We strongly support your efforts to adopt a comprehensive national strategy on waste disposal and minimization. However, we urge that any approach adopted be grounded in scientific evidence of need, and not as a result of "perceptions" of risk.

We look forward to continuing our work with Congress and federal agencies in refining waste definitions and improving understanding of appropriate waste management practices. AHA and our affiliate, the American Society for Hospital Engineering, have worked actively with both regulators and our members on these issues for several years and are eager to resolve the remaining problems discussed today.

WRITTEN TESTIMONY OF THE

CHEMICAL MANUFACTURERS ASSOCIATION

BEFORE THE

SUBCOMMITTEE ON HAZARDOUS WASTE AND TOXIC SUBSTANCES

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

UNITED STATES SENATE

ON

S.2773

WASTE MINIMIZATION AND CONTROL ACT OF 1988

October 14, 1988

INTRODUCTION

The Chemical Manufacturers Association (CMA) is pleased to submit this written testimony on S.2773, The Waste Minimization and Control Act of 1988. We respectfully request that our testimony be included in the September 26, 1988 hearing record.

CMA is a non-profit trade association whose member companies represent over 90 percent of the productive capacity of industrial chemicals in the United States. CMA has been an active participant in each legislative discussion regarding solid and hazardous waste. We are pleased to participate in the RCRA reauthorization activity which this Subcommittee has initiated with S.2773.

Because S.2773 was only recently introduced, our comments are necessarily preliminary in nature. As we become more acquainted with the bill, additional points of support and issues of concern may arise. We look forward to working with the Subcommittee as the discussion evolves.

Our comments begin below in the order of the titles as they appear in the bill.

TITLE I: GENERAL AMENDMENTS

The Definition of "Municipal Waste Incineration Unit" Is Too Broad And Would Inadvertantly Require Permitting of All Industrial Furnaces and Boilers Burning Any Solid Waste.

Under Sections 203(e), permits based on stringent emission limits would be required for each "municipal waste incineration unit," defined in Section 104 as a:

> distinct operating unit of any facility at which the combustion of any solid waste material collected from commercial or industrial establishments or the general public (including single and multiple residences, hotels, and motels) occurs. Such term does not include incinerators or other facilities required to have a permit under section 3005 of the Solid Waste Disposal Act.

This definition would capture waste combustion units that burn solid wastes even though they are not municipal units and do not burn household trash. Specifically, boilers and industrial furnaces that burn only industrial solid waste would be "municipal waste incinerator units", as defined in S.2773. Although these boilers and industrial furnaces are generally regulated under RCRA, since they are not permitted, they are not excluded from the definition of "municipal waste incinerator unit" by the last sentence of the definition.

Presumably the drafters did not intend to include industrial furnaces and boilers in this municipal incinerator definition since the composition and variability of the wastes burned in these industrial furnaces and boilers are substantially different from that of municipal trash burning incinerators. To rectify this situation, Congress should revise Section 104 as noted below.

> "The term municipal waste incineration unit means a distinct operating unit of any facility at which the combustion of any solid waste material collected from commercial or industrial establishments *and* the general public (including single and multiple residences, hotels and motels) occurs. Such term does not include incinerators or other facilities *regulated under Subtitle C* of the Solid Waste Disposal Act."

These revisions will clarify that, to be included in the definition of a municipal incinerator, the unit *must* burn solid waste from the *general public*. This would ensure that devices such as on-site solid waste incinerators, boilers and furnaces burning solid waste for material or energy recovery, and other combustion units *not* burning municipal waste are excluded from this provision. Those units could be regulated to the extent necessary pursuant to the schedule for "other solid wastes" as required in Section 204(a) of the bill. The second clarification would exclude units regulated under Subtitle C of the Solid Waste Disposal Act, even if a permit is *not* required under that Subtitle. EPA can incorporate in the relevant regulatory and permit programs under Subtitle C any provisions for those units burning solid *and* hazardous wastes which are necessary to protect human health and the environment.

TITLE II: SOLID WASTE MANAGEMENT

CMA recognizes the need for a stronger federal program for nonhazardous (i.e., solid) waste. We support the general approach in S.2773 that gives states primary authority and responsibility to adopt and implement solid waste regulations through a permit system based on national criteria EPA establishes and oversees. We, however, do have some concerns which are discussed below.

The Federal Nonhazardous Waste Program Should Be Flexible And Account For Differences Among Solid Wastes and Differences Among States.

Nonhazardous wastes comprise a far vaster universe of wastes than hazardous waste. EPA's latest survey (1986) indicates that about 300 million tons of hazardous waste are being managed each year at about 3000 hazardous waste facilities. 1/ Contrast this with about 11 billion tons of solid waste per year being managed at about 472,000 solid waste management facilities that would be subject to permitting under S.2773. 2/

Moreover, solid wastes are generated from numerous, diverse sources -- municipal, manufacturing, mining, oil and gas exploration, medical, construction, etc. Further, the wastes generated by a single source can vary widely with regard to the hazards, the degree to which the wastes can be recycled, and how they can be treated, stored and disposed. Regulation of these

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1/ The Hazardous Waste System; EPA; p. ES-4, Exhibit 2 (June, 1987) (Source: National Screening Survey, 1986).

2/ *See* 53 Fed. Reg. at 33315-33316 (Aug. 30, 1988).

varying wastestreams must be tailored to account for these varying characteristics. Across-the-board prescriptive requirements will not adequately account for the varying characteristics.

Thus, Congress should mandate the development of federal criteria that provide EPA and the states with sufficient flexibility to account for the huge universe of solid waste, the varying characteristics of the waste, and the varying administrative systems among the states. Congress should not enact detailed prescriptive requirements in legislation, but rather define the necessary elements of a state program and leave implementation to EPA and the state agencies charged with carrying out general Congressional directives. Additionally, Congress should resist the temptation to transplant into the solid waste program inappropriate elements of EPA's regulation of hazardous waste under Subtitle C. The existing Subtitle C regulatory program has significant problems and in many cases is not well suited for management of the wide variety of Subtitle D wastes and facilities.

Section 204(c)(2)(B) illustrates the high degree of prescription in S.2773. That section would require that each municipal solid waste landfill have

> "leachate collection and removal systems installed immediately above a liner, which shall be sufficiently permeable to allow the leachate collection and removal system to function, and designed and constructed to maintain less than 30 centimeters of leachate head from the landfill during the active life and post-closure care period."

Congress should not mandate such highly technical requirements as "30 centimeters of leachate head" but should require EPA to specify appropriate criteria after public input.

As another example, Congress directs EPA in Sections 204(a)(3) and 204(d) to develop regulations for air emissions from municipal waste incineration facilities that "reflect the greatest degree of emission limitation achievable through application of the best available control technologies and practices which . . . has been achieved in practice by 5 or more municipal waste incineration units . . ." The bill, however, would go beyond this very stringent technology standard. It would prescribe which constituents must be subject to emission limitations and establish minimum limitations. To quote a portion of Section 204(d)(2)(B):

> In no event shall any such standard allow an outlet gas carbon monoxide concentration greater than 50 parts per million on a 4-hour average; an outlet gas particulate concentration greater than 0.100 grains per dry standard cubic foot corrected to 7 percent oxygen, an outlet gas concentration of sulfur dioxide greater than 40 parts per million on a 3-hour average, unless uncontrolled emissions of sulfur dioxide are reduced by not less than 70 percent; an outlet gas concentration of hydrogen chloride greater than 30 parts per million on a 3-hour average, unless uncontrolled hydrogen chloride emissions are reduced by not less than 90 percent; or a retention temperature and time of less than 1800 degrees Fahrenheit or less than 1 second at fully mixed height (or the equivalent). Standards promulgated under subsection (a)(3) may allow an outlet gas carbon monoxide concentration greater than 50 parts per million during 1 per centum of the operating period in any month provided that such concentration shall not exceed 100

> parts per million averaged over four years. Compliance with particulate standards promulgated under this subsection (a)(3) may be demonstrated by an average concentration calculated on the basis of three tests taken at intervals scheduled by the permitting authority.

These statutory requirements permit no flexibility. If an emission limitation is infeasible, improperly expressed, or fails to account for unavoidable variability, EPA and the states have no choice but to administer the statutory requirements with the potential result of either shutting down any municipal incinerator that cannot comply or requiring large expenditures of public funds for no environmental benefit. To avoid these problems, we urge Congress to establish general directives and allow EPA and the states to set the detailed technical requirements that must be met.

A Categorical Requirement to Use Double-Liners And Leachate Collection Systems For All Industrial Nonhazardous Waste Impoundments Is Unnecessary and Inappropriate.

Of particular concern to the chemical industry is the very prescriptive and categorical requirement in Section 204(h) that all industrial solid waste impoundments, within four years of enactment, either meet the requirements of RCRA Section 3004(o)(1)(A) (have double liners and a leachate collection system), close, or obtain a retrofitting variance from EPA under RCRA Section 3005(j)(2),(3) or (4). This across-the-board retrofitting requirement is environmentally unnecessary and inappropriate. Although some nonhazardous wastewater impoundments may require double-liners and leachate collection systems, there are many others that do not because they contain dilute levels of hazardous constituents. Additionally the retrofitting requirement is inequitable since many of these impoundments were constructed in the 1970's to meet the stringent effluent limitations under the Clean Water Act. The retrofitting requirement also will be enormously expensive and may dislocate manufacturing operations since these impoundments are often tens to hundreds of acres in size and are necessary to treat process wastewater. These concerns are discussed in greater detail below.

1. Impoundment standards should be commensurate with the often minimal concentrations of hazardous constituents in the impoundment.

In the chemical industry, over 98 percent of all the hazardous waste is process wastewater. EPA estimates that for all industries, over 90 percent of the hazardous waste is wastewater. 3/ With respect to nonhazardous waste, of the 227,000 Subtitle D facilities (the number does not include oil and gas exploration or mining waste facilities), 191,500 or 84 percent are wastewater impoundments. It is therefore critical to fully understand the environmental concerns relating to wastewater impoundments and to regulate them according to the hazards they present.

3/ The Hazardous Waste System; EPA, p. 2-3 (June, 1987) (Source: National Screening Survey, 1986).

The central environmental concern is not the concentration of the constituents in the waste when the waste goes into the impoundment as influent, but rather the concentration that could possibly be released into the groundwater. This latter level is reflected by the concentration of the constituents in the basin of the impoundments. The in-basin concentration is the concentration the environment would "see" if a release occurs. The in-basin concentration is the concentration that could get into the groundwater (after some additional dilution and attenuation during transport to the groundwater). If the in-basin concentration is insignificant and does not pose a threat to human health and the environment, double-liners and leachate collection systems should not be required.

In many if not most impoundments, the in-basin concentrations are often 1 to 5 percent or less of the influent concentrations. CMA recently supplied data to this effect to EPA. Thus, there is no environmental need to double-line all industrial nonhazardous wastewater impoundments.

Certain kinds of impoundments typically have dramatic reductions in concentration levels from the inlet to the basin. One example is a biological wastewater treatment impoundment that receives organic contaminated wastestreams. Bacteria in the impoundment essentially consume the organic materials to the point where the organic constituents are often not detectable in the basin. These biologically active impoundments are common in the chemical industry and, in many cases, are the backbone of on-site wastewater treatment processes that are required to meet the standards under the Clean Water Act.

As another example, many industrial wastewater treatment facilities employ very large tertiary surface impoundments to provide final polishing of the effluent after secondary treatment and prior to final discharge. These large tertiary impoundments buffer small, transient changes in secondary treatment effluent quality and provide final removal of certain organic constituents. Due to their large size (5 to 50 or more million gallons), it is impractical to replace such tertiary impoundments with tanks even at significant expense. Furthermore, since such polishing tanks would have shorter retention times and thus less buffering capacity, they may result in less efficient treatment than the replaced impoundments. As a result, final effluent quality and stream water quality may deteriorate.

There are also other types of industrial nonhazardous wastewater impoundments that have insignificant constituent levels in both the influent and basin, but under S.2773 would still have to have double-liners. An example of this is a process cooling water impoundment. These impoundments often hold millions of gallons of water, typically pumped out of nearby rivers, that is circulated and recirculated through the process for cooling purposes without contacting any process streams. Insignificant levels of hazardous constituents are often in the water either naturally from the river source or from algaecide additives that keep down bacterial growth in process cooling equipment. These cooling water impoundments present no threat to human health and the environment, yet they too would have to be double-lined or replaced with tanks under S.2773. Since these impoundments typically cover tens to hundreds of acres in size and since the production process cannot operate without them, the retrofit requirement would be enormously expensive and could dislocate the manufacturing operations, yet no environmental benefit would result.

On the other hand, there are also nonhazardous wastewater impoundments (e.g., a spill diversion basin) where the influent contains hazardous constituents of concern and where little treatment occurs in the impoundment to reduce the constituent concentrations. These impoundments may require additional regulatory controls, including double-liners and leachate collection systems. But just because some nonhazardous wastewater impoundments should have double-liners and leachate collection systems does not mean that every impoundment should have such controls.

We urge Congress to fundamentally reexamine the approach to wastewater regulation and to establish standards that are commensurate with the hazards of the wastewater in the impoundment. Congress should not perpetuate in Subtitle D the Subtitle C mistake of categorically requiring double-liners and leachate collection systems for all industrial nonhazardous wastewater impoundments.

2. The double-liner requirement is particularly inequitable for impoundments that are part of wastewater systems that treat the waste to meet stringent effluent limitations under the Clean Water Act.

To meet the mandate of the Clean Water Act (CWA), in the 1970's most industrial plants installed extensive wastewater collection and treatment facilities that have many years of remaining useful life. These wastewater treatment facilities reduce to low concentrations the potentially toxic chemicals from the plant's discharge to surface waters. This has been accomplished, for the most part, by installing treatment systems incorporating biological treatment processes. Many of these systems use wastewater surface impoundments the discharge from which is regulated under the CWA. Most of these impoundments are regulated under Subtitle D of RCRA today.

Few of the Subtitle D impoundments have double-liners or leachate collection systems. If S.2773 were enacted, most of the impoundments would have to be redesigned and reconstructed with double-liners and leachate collection systems or be replaced with tanks. This would be a dramatic and an inequitable change in requirements.

3. Retrofitting or replacement of impoundments with tanks would be enormously expensive and could interfere with production.

CMA and EPA have separately estimated that the cost of retrofitting an impoundment with double-liners and a leachate collection system or to replace it with tanks would cost over $1 million per impoundment acre. Since wastewater impoundments are often tens to hundreds of acres in size, considerable expenditures would result from S.2773.

Additionally, for many impoundments, it will be operationally very difficult to shut off the flow to the impoundment, drain it, and retrofit it with double-liners and a leachate collection system. This is because wastewater treatment often cannot be shut off or replaced without shutting down the manufacturing process. Water use for processes and cooling cannot be eliminated from many manufacturing operations. Many plants generate several million gallons per day of process wastewater and therefore on-site treatment, storage and disposal is the only feasible management alternative. The retrofitting requirement for wastewater impoundments contemplated in S.2773 would thus unavoidably interfere with some manufacturing processes.

4. The retrofitting variances are too limited.

While Section 204(h) of S.2773 provides for certain variances from the double-liner and leachate collection system retrofit requirement, the variances are too limited and will provide for little relief.

The first variance would be based on RCRA Section 3005(j)(2). Retrofitting would not be required if the impoundment has one liner and is located more than 1/4 mile (horizontally and vertically) from an underground source of drinking water. EPA has indicated that almost every hazardous waste impoundment in the country is within 1/4 mile from an underlying source of drinking water. It is no surprise therefore that EPA has never granted a Section 3005(j)(2) variance. A similar situation would likely be the case for Subtitle D impoundments.

The second variance would be based on RCRA Section 3005(j)(3). Retrofitting would not be required if the impoundment is an "aggressive biological treatment facility" that discharges to POTW's or under an NPDES permit and complies with 40 C.F.R. 264 and 265 Subpart F requirements. The initial impoundment must have "intense mechanical aeration to enhance biological activity to degrade wastewater pollutants." Also the initial impoundment must have either (1) no more than an annual average of five days' hydraulic retention time; (2) or no more than 30 days if the sludge is not EP toxic; (3) or involve activated sludge treatment. Further, the variance does not apply to any impoundment (e.g., equalization impoundment) in the system that precedes the impoundment where the aggressive biological activity occurs. EPA has granted this variance only about five times for hazardous waste impoundments. However, it is not clear how often nonhazardous wastewater impoundments will be able to meet these very specific requirements.

The third variance would be based on RCRA section 3005(j)(4). Among other criteria, the owner/operator must show that there will be "no migration of any hazardous constituent into groundwater or surface water at any future time." EPA has granted this variance only once and it is not clear how often it would be granted to nonhazardous wastewater impoundments.

If many nonhazardous wastewater impoundments do apply for the variances, a different problem would result. The Subtitle C retrofitting variance process is resource intensive and time consuming. Given the much larger universe of Subtitle D industrial impoundments, EPA and the states simply may not be able to process in a timely manner the more numerous variances that will be needed if S.2773 were enacted. Rather than requiring EPA to grant thousands of variances, Congress should allow EPA to set appropriate standards for the types of wastes managed in surface impoundments.

For all of the above reasons (the often low in-basin concentrations; the CWA regulatory structure; the cost; the manufacturing process interruptions; and the questionable variance process), CMA strongly urges Congress not to categorically require double-liners and leachate collection systems for all industrial nonhazardous industrial wastewater impoundments.

Subtitle D Permits Should Avoid The Subtitle C Permit Problems.

CMA agrees with the authors of S.2773 that the Subtitle D program should be administered through a state permit system. It is imperative, however, that the Subcommittee recognize in S.2773 that not all solid waste facilities should be individually permitted. Just as EPA has established justifiable exemptions from permitting under Subtitle C, EPA and the states 4/ should have that same discretion under Subtitle D. Having to obtain a full-scale permit for every one of the estimated 472,000 solid waste management facilities is unrealistic and unnecessary.

It is equally imperative that Congress give EPA and the states flexibility to craft a workable permit process. The current Subtitle C permit process is not working for the approximately 1500 hazardous waste facilities that require permits. The process must be improved if the much larger universe of 472,000 solid waste management facilities are to be addressed.

A typical Subtitle C permit today takes one to four years to complete, and all but the most minor permit modifications require one to two years. The objective of better nationwide management of solid waste cannot be achieved if improved facilities cannot be promptly permitted, constructed, and operated. An overly burdensome permitting system can discourage technological innovation and contribute to stagnation in waste management improvements and capacity. If permitting is not made more efficient, there is a high degree of probability that the revamped Subtitle D program in S.2773 will not be successful.

4/ CMA recognizes that states have the primary role in permitting, and EPA steps in only when the state fails to carry-out the permitting. We, however, refer to both EPA and the states in this permitting discussion because, depending on the situation, both entities could administer the permit system.

To make Subtitle D permitting efficient, Congress should address the following problems in the Subtitle C system and make changes to S.2773 as necessary to avoid these problems in the Subtitle D context:

- Pre-Permitting Construction. RCRA section 3005(a) prohibits construction of a hazardous waste treatment, storage or disposal (TSD) unit without a permit. This requirement typically delays the time in which new TSD capacity is available by one to four years. Pre-permit construction should be allowed while the permit application is pending. If during the permit review, the state agency disapproves certain design specifications that have already been incorporated in the construction, the owner/operator would have to revise the construction at his expense.
- Redundant Information. In RCRA Section 3005(b), Congress envisioned a permit that would include waste and facility specific information. EPA has expanded those Subtitle C information requirements to the point that a typical TSD facility permit application measures several feet thick as compared to a less-than-100-page NPDES permit for the effluent discharge from the same TSD facility.

The existing RCRA Subtitle C permit application is encumbered by redundant and unnecessary information that slows down the application and review process. Much of the permit application information that EPA requires duplicates plans (e.g., personnel training plan) and other documentation (e.g., training records) that an owner/operator must have on-site and make available to EPA inspectors during on-site inspections. Also, the permittee often must recite verbatim in the permit application (instead of refer to) the standards, analytical procedures and deadlines that appear in the regulations. Notices of permit application deficiencies would be greatly reduced if these duplicative items were not required to be included in the permit application.

The Subcommittee should make clear in S.2773 that a Subtitle D permit application should contain only waste and facility information that is necessary for managing the waste so as to protect health and the environment. The application should not contain information that is repeated elsewhere in the facility's on-site plans and documentation or in the applicable federal or state rules. Similarly, there is no need to clutter the permit application with specifics as to how or when the permittee will satisfy regulatory requirements, or what analytical procedures he will use. References to the relevant requirements should be adequate. Finally, detail should not be required unless it is material to determining protection to health and the environment. Summaries of the owner/operator's plans should generally be acceptable.

- Class Permits. Many solid waste TSD units are similar in design, operation, and potential hazards, e.g., storage and transfer stations. EPA or the state should not have to permit such units individually, but should permit like units as a class. EPA questions its existing Subtitle C authority to issue class permits because of the focus in RCRA 3005(b) on site and waste specific information. The Subcommittee should clarify in S.2773 that EPA and states have authority to issue class permits to solid waste management facilities and that EPA and the states should liberally exercise that authority. Further, site and waste specific information should only be required in class permit applications to the extent such specific information would make a significant difference in determining, relevant to Subtitle D, whether there is adequate protection of human health and the environment.

The Corrective Action Requirement Should Be More Tightly Drawn To Require Remediation Of Only Those Releases That Threaten Health Or The Environment.

CMA agrees that corrective action should be taken to contain and remediate releases of hazardous constituents from a solid waste management unit that is causing or is likely to cause harm to human health or the environment. Thus, we support the basic objective of Section 204(i). We, however, have concerns about some of the specific language.

First, as drafted, the facility would have to show that it "is not releasing hazardous substances into the environment or is controlling such releases through corrective action." The language is overly broad because it does not recognize that corrective action is not necessary or appropriate for insignificant releases. Under the current language, any release of a hazardous substance presumably would have to be remediated.

Another problem with the language of Section 204(i) is that it would require corrective action if the owner/operator cannot demonstrate that "no release is occurring." Proving this negative will seldom be possible.

To rectify these problems, CMA suggests that Congress clarify this provision and direct EPA or the states to require "corrective action for releases of hazardous constituents from solid waste management units as necessary to protect human health or the environment." The effect of this change is that all releases that threaten human health or the environment will be subject to corrective action. In contrast, releases that do not pose a threat will properly not be subject to corrective action.

This is of critical importance because EPA estimates that corrective action at a typical hazardous waste management facility will range between $32 and $52 million. 5/ If corrective action at solid waste management facilities approaches this cost, the total national bill could be enormous for the potentially 472,000 solid waste management facilities that could be subject to corrective action. 6/ Surely Congress should not require one to undertake these enormous expenses unless it is necessary to protect human health and the environment.

Second, the corrective action provision should relate to releases of hazardous constituents, as we suggest in our language above, and not to releases of "hazardous substances" as currently drafted in Section 204(i). This change would create consistency between this provision in S.2773 and the other RCRA corrective action authorities in Sections 3004(u) and 3008(h).

Third, the corrective action provision should relate to releases from solid waste management units, instead of from anywhere throughout the "facility." "Facility" in the current

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5/ See Draft Notice of Proposed Rulemaking: Corrective Action for Solid Waste Management Units, Executive Summary of Regulatory Impact Analysis, p. ES-22 (Dec. 11, 1987).

6/ See 53 Fed. Reg. at 33316/3 (Aug. 30, 1988).

language of Section 204(i) could mean the entire plant site. (EPA has so defined it in RCRA Section 3004(u)). If it is so broadly defined, corrective action could be imposed for releases that occur from manufacturing areas as well as from solid waste management units throughout the plant site. While we do not object to corrective action for releases from solid waste management units anywhere in the plant site, we do object to RCRA being used to require remediation for releases from manufacturing areas. Current state non-degradation statutes and regulations adequately cover releases from manufacturing areas. Moreover, Congress has heretofore avoided requiring corrective action that could substantially interfere with manufacturing operations, and Congress should not now provide for such radical new authority in S.2773. Accordingly, the language CMA suggests above is limited to releases from solid waste management units anywhere in the plant site, which is clearly within the statutory purview of RCRA.

Fourth, section 204(i) also does not provide for realistic time frames to demonstrate that there are no releases from the facility, or if there are, to implement corrective action. Municipal solid waste landfills in metropolitan areas are supposed to demonstrate this within 12 months of enactment based on groundwater monitoring results. Under section 203(a), non-municipal solid waste facilities and municipal impoundments may also have only 12 months from enactment to demonstrate no releases based on groundwater monitoring results.

A facility simply cannot plan a groundwater monitoring system, drill the wells, obtain reliable samples, and, if necessary, implement corrective action within one year. EPA's current Subtitle C regulations provide one year to install wells and require one full year of sampling to establish background levels in groundwater. See 40 C.F.R. 265 Subpart F and 264.97(g)(1). These regulations recognize that samples must be taken over a one-year period to reliably characterize groundwater. This is due not only to variability in measurement, but also to climatic conditions that can elevate or depress constituent levels, flow rate, etc. Additionally, corrective action will typically take at least one year to implement and often several years. For these reasons, Congress should extend the one-year time frame to two or three years.

Our fifth concern with the corrective action provision is that it does not address the overlap between corrective action under S.2773 and under RCRA Sections 3004(u) and 3008(h). Under S.2773, corrective action applies to all solid waste management units. Under existing RCRA provisions, corrective action applies to all solid waste management units at a Subtitle C permitted facility (Section 3004(u)) and to solid waste management units at a facility authorized to operate under interim status (Section 3008(h)). Thus, solid waste management units may often be subject to both S.2773 and Subtitle C requirements. What happens if EPA or the states impose different or duplicative requirements under S.2773 and current RCRA Subtitle C? To avoid the problems that would result, we suggest that a unit that is subject to corrective action under Subtitle C should be excluded from Subtitle D requirements. This resolution does not promote "forum shopping"; it merely avoids duplication.

States Will Need More Time To Adopt And Implement The Federal Program.

States are provided only one year to adopt and implement permitting programs for the treatment, storage and disposal of Subtitle D wastes. See proposed Section 203(a). The Subtitle D program under S.2773 is extensive and more comprehensive than the existing solid waste programs in most states. New budgeting and personnel will likely be required. Also, a significant number of states lack statutory authority to permit anything other than solid waste disposal facilities. Further, S.2773 would require permits to address a number of other specific areas (e.g., financial assurance) that will require changes to many state statutes and regulatory programs. Finally, some state legislatures do not meet every year, and thus could not enact timely legislation.

Congress should provide the states with a more realistic time frame in which to implement the elements required under S.2773 to maintain the authority they have traditionally exercised to regulate nonhazardous wastes. Under other RCRA provisions, EPA has allowed states two years to make statutory changes that are necessary to accommodate federal programs. EPA also "clusters" new federal Subtitle C regulations and programs into groups as they are finalized. The states can then adopt the cluster pursuant to a reasonable schedule. This avoids the inefficiency of a never-ending statutory or regulatory amendment process at the state level. Congress should provide for more flexible timing in S.2773. At a minimum, states should be given two to three years to adopt and implement the Subtitle D permitting program, and "clustering" should be allowed.

Criminal Penalties Should Be Consistent with RCRA Subtitle C Provisions And Not Attach To Minor Permit Violations Or Other Insignificant Statutory Violations.

Section 205(e) would subject "any person who knowingly or willfully violates any requirement of this subtitle or any permit . . ." to criminal fines and imprisonment. In contrast to this broad criminal authority for nonhazardous waste, under current RCRA hazardous waste regulations, criminal penalties properly attach in narrow situations.

First, under Subtitle C only knowing violations of a *material* condition or requirement of a hazardous waste permit subject the owner/operator to criminal liability. *See* RCRA Section 3008(d)(2)(B). Further, with respect to violations of Subtitle C requirements that are outside the permit, only specified violations subject the owner/operator to criminal penalties (*e.g.*, knowing failure to use a manifest; knowing export of hazardous waste without the consent of the foreign country).

CMA urges Congress to reconsider its broad approach in Section 205(e) to criminalizing even minor infractions of the solid waste management standards. Like RCRA Subtitle C, only knowing violations of material permit or non-permit conditions should merit criminal sanctions.

CMA Supports The Recycling Exception To The Export Controls But Is Confused By The "Tariff Code" Reference.

CMA agrees with the authors of S.2773 that the prohibition on export of solid and hazardous waste should not apply to materials exported for recycling. We, therefore, support the concept of a recycling exception that appears in Section 206(a) of S.2773.

We are confused, however, by the recycling exception applying to "material exported for recycling identified under United States tariff codes as secondary recovery materials." S.2773, Section 206(a). Presumably the "codes" referred to is the Harmonized Tariff Code of the United States. In reviewing this Code, we find no references to "secondary recovered materials." The Subcommittee should clarify this and ensure that the identification system for the recycling exception is workable and comports with standard terminology.

TITLE III: WASTE REDUCTION AND RECYCLING

CMA wholeheartedly agrees with the authors of S.2773 that waste reduction and recycling are the best ways to reduce releases to the environment from Subtitle D facilities. We agree that there is a need for greater sharing of technology information as is reflected in the provisions of S.2773 relating to state assistance, data-base development, technical assistance grants, and an information clearinghouse. Notwithstanding our support of these concepts, we are not convinced that additional legislation is needed to accomplish meaningful waste reduction. Furthermore, Congress should await the report of the National Academy of Sciences regarding the efficiency of mass balance before enacting a production efficiency standard such as in Section 305(a).

Congress Should Await the Mass Balance Report From The National Academy of Sciences Before Requiring An Efficiency Standard.

Section 305(a) provides for a production efficiency standard that would require that no more than five percent of production throughput of hazardous substances may be released to the environment. 7/ The essence of the proposed efficiency

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7/ These terms are not defined in the statute, but we will assume that they are intended to take on the definitions in the background paper from the Natural Resource Defense Council which, we understand, is the basis of the proposal. Thus, the standard would prohibit emissions of Section 313 toxic chemicals that exceed five percent of production throughput defined as: (1) the amount of the toxic chemical (footnote continued) standard is to perform a mass balance where an owner/operator calculates what goes into his process and compares it to what comes out as product or waste. Just two years ago in the Superfund Amendments and Reauthorization Act (SARA), Congress addressed the technical feasibility of mass balance. Congress concluded that it was a highly complex question, and accordingly directed EPA to have the National Academy of Sciences (NAS) study the subject. Specifically, Congress said one purpose of the study was "to assess the value of obtaining mass balance information or portions thereof to determine the waste production efficiency of different facilities, or categories or facilities . . . ." SARA, Section 313(e). That study is still underway and the NAS report is expected in early 1989. Before any mass balance requirements are enacted, Congress should allow that study to be completed, and use the report to gauge the practicality of measuring an efficiency standard.

Incentives Exist to Foster Waste Reduction.

CMA does not think there is a need for the production efficiency standard in Section 305(a). The standard assumes that a chemical manufacturer does not attempt to make its processes more efficient by reducing waste. It assumes that a mandated standard is necessary to encourage waste reduction. These assumptions are erroneous.

(footnote continued from previous page)
consumed on-site; (2) the amount of the toxic chemical shipped off-site; and (3) the quantities of the toxic chemical released to the environment.

Waste reduction has been practiced by the chemical industry for many decades because of a basic need for companies to reduce production and waste management costs and gain a competitive edge in the market place. Because of the high cost of raw materials, it is a basic tenet of chemical engineering to examine the feasibility of source reduction and recycling in order to minimize loss of raw materials and maximize product output. Chemical manufacturers have programs designed to improve yields, reduce energy usage, optimize capital spending, etc. Additional emphasis on these efforts have come with the growing understanding that practicing environmental stewardship is an essential element for maintaining long-term company viability. Moreover, with the increased need to improve product quality to remain internationally competitive, waste is being reduced through new-processes, more recycling, and better housekeeping.

Waste generation is also directly discouraged by the many existing environmental statutes. Treatment, storage and disposal costs are escalating due to the need to meet increasingly stringent regulatory requirements. Companies also recognize that waste reduction and recycling reduces their CERCLA and RCRA cleanup liability and their toxic tort exposure. Additionally, the Clean Water Act has resulted in enormous improvement in discharge quality over the last decade, and the new effluent guidelines for most of our processes will require further improvements. The improvement in discharge quality is not only attributable to treatment, but also reduction in raw waste loading. Likewise, the SARA 313 reporting requirements and existing Clean Air Act programs provide similar incentives for reduction of air emissions. Congress should allow the effects of these programs, many of which are recent legislative changes, to unfold before it prematurely adopts additional legislation.

In Chapter 3 of "Serious Reduction of Hazardous Waste," the Office of Technology Assessment reports several examples of company success at waste reduction. Some examples are:

- DuPont was able to eliminate a hydrochloric acid wastestream from Freon production. DuPont installed a $16 million conversion unit to change anhydrous hydrogen chloride into chlorine. The chlorine is recycled back into the process and the hydrogen is used as a fuel in the plant. Id. at 78.
- 3M replaced a chemical process to clean flexible metal electronic circuits with an entirely mechanical process, thus eliminating the chemical waste. Id. at 79.
- Amoco Chemicals Corp. modified a manufacturing process and reduced its ignitable and oily wastes by 60 to 70 percent. Id.
- Dow Chemical reduced both wastes and costs in a crude-product drying system when it installed a computer and an on-stream analyzer to adjust the concentration of the drying agent in the flow. The drying additive was reduced by 37 percent. Id. at 80.
- Monsanto changed polystyrene production from batch reactors to a closed-system continuous process. This modification reduced air emissions from 5 percent of total production to less than .02 percent. Id. at 89.
- Borden Chemical Co. reduced cleaning wastewater by no longer filling reactor vessels with water to clean them. Instead they used 5 percent of the previous volume in the reactor for the initial

> rinse, allowing a concentrated solution of phenol resins to be recycled back into production. Id. at 91.

What is needed is not a mandatory efficiency standard, but rather more transfer of technology, development of a useful national data base, state grants, and an information clearinghouse, all of which can be accomplished without new legislation. Indeed, EPA is developing a program that addresses many of these needs. Furthermore, CMA has developed its own complementary program involving such things as workshops, resource manuals, and chemical industry data collection.

A Sensible Efficiency Standard Cannot Be Mandated Because The Decision to Choose A Particular Process Must Depend On Many Factors, Not Just On Reduction Of Toxic Chemical Emissions.

The efficiency standard assumes that Congress, with implementation by EPA, can mandate a uniform efficiency standard that makes technical sense for diverse industries and processes. Our best estimate is that about 60,000 chemical products are produced commercially in the United States. Many chemical products may be produced using any one of 5, 10, 20 different manufacturing processes. We doubt if anyone could define the optimum efficiency level for these numerous and diverse processes.

The decision of which process to use at a plant depends quite properly on many factors other than just the amount of Section 313 toxic chemicals that are emitted. The other factors include, for example: raw material supplies; the quality of the raw materials; sources of energy; available catalysts, reactants, etc.; available technology at the plant (including proprietary licenses and patents); the secondary materials and by-products available from other plant processes; whether the secondary materials and by-products can be efficiently recycled and reused; the stringency of customer specifications; and production requirements for other products.

The efficiency standard would make the issue of how Section 313 toxic chemicals are used and emitted more important than the other production decisions that must be made. Section 313 toxic chemical usage and emissions do not even accurately reflect the whole waste picture.

Moreover, a focus on such usage and emissions does not make good business or production sense, and it often will be environmentally counterproductive. For example, it may discourage a process that is energy efficient but that results in six percent toxic chemical emissions. As another example, it may cause a manufacturer to choose a process that generates four percent high toxicity emissions over one that generates six percent low toxicity emissions. As another example, it may result in less pure products (e.g., pharmaceuticals or food grade products) because the manufacturer had to eliminate some final purification steps to meet the 95 percent efficiency standard.

In addition to process problems, many other factors affect the amount of waste reduction and recycling that can be achieved in a manufacturing process. These include frequency of plant redesign, frequency of product reformulation, and consumer demand for product quality and product specification. In the case of mature industries, such as petroleum refining or commodity chemicals where there is little process or plant change, the opportunity for additional short-term waste reduction is greatly limited.

Because there are so many factors that legitimately must be considered to reduce toxic chemical emissions, the proposed efficiency standard would involve a much greater governmental effort than is currently required under existing environmental statutes which principally regulate end-of-the pipe waste. As the Office of Technology Assessment's Report: "Serious Reduction of Hazardous Waste" states:

> ...There are so many technical approaches to waste reduction and they are so much a part of fundamental aspects of production technology that setting levels of required waste reduction would be a formidable task for government. The diversity of American industry has already confounded traditional end-of-pipe regulatory programs, and problems would be compounded many times in a mandatory waste reduction regulatory approach for production activity within plant operations. The information requirements for setting federally mandated waste reduction levels would be so great that it would take years of data collection and analysis before such an effort could begin.

A 95 Percent Efficiency Standard Is Technically Infeasible For Many Processes.

CMA member companies are beginning to look more closely at the efficiency standard to determine the extent to which it is a realistic target for their processes. One problem is that critical terms such as "production throughput" are not defined. Even if we assume it will be defined as NRDC has defined it in its background paper, it is too early to conclude how often the standard will be technically feasible. Below, however, are examples of processes that will never meet the target.

PROCESS 1:

Problems with meeting an efficiency standard will arise with most pharmaceuticals and food-grade chemicals. Section 313 substances are used in the pharmaceutical and food-grade chemical industries as raw materials, deactivators, and extractive solvents. Because of the Food and Drug Administration (FDA) restrictions on re-use of reaction mixtures, any Section 313 substance not consumed during the process becomes a waste. At the low inherent yields for these processes, few such substances, even if largely consumed, would meet the proposed 95% efficiency standard. Extractive solvents are often recovered, reclaimed, and reused. These solvents can not meet the proposed efficiency standard unless recycling is specifically included in the calculation of such standards.

To explain more fully, most pharmaceutical products and food-grade chemicals are produced in batch reactors ranging in size from 250 gallons to 5000 gallons. An individual product is manufactured by loading raw materials into a reactor; mixing the ingredients; and obtaining the temperature, pressure, and other conditions for the time necessary to allow desired reactions to take place. Frequently, because these products are complex organic molecules, the reactions take place by fermentation. After the maximum product has been generated in the reactor, the contents are deactivated (usually by heat sterilizing or by chemically "killing" the fermenting bacteria) to prevent further reactions. The desired product is then separated from the reaction medium (broth in the case of fermentation) by use of a selective solvent that dissolves the desired molecule but not other by-products or ingredients. Finally, the product is generally recovered from the solvent by evaporating the solvent. The deactivated broth in a fermentation process is discarded after deactivation as it can no longer produce the desired product. Non-fermentation reaction mixtures are also discarded after deactivation in accordance with the large scale good manufacturing practice requirements issued by the FDA to prevent contamination of subsequent batches. Product yields in pharmaceutical and food-grade chemicals are generally one to five percent by weight of the total reaction mixture.

PROCESS 2:

Similarly, certain chemicals have low stoichiometric yields -- a large amount of certain raw materials must be used as an ingredient to produce a relatively small amount of product. Products that can only be produced with low stoichiometric yield chemicals will inherently have great difficulty meeting a uniform efficiency standard. Examples include almost all products that are complex molecules such as dyes and pigments. They are synthesized using a series of individual chemical process steps. Each process step has an inherent efficiency limited by the stoichiometric yield. In fact, no chemical reaction results in 100% conversion of raw materials into a single product. The completeness of the reaction is determined by the chemical equilibrium between the reactants and the desired product and by-products.

For example, many organic dyes are synthesized in steps where various pigment producing atoms are attached serially to a base molecule to produce a pigment that will chemically bond to the desired fabric. As each pigment group is attached, some non-reacted base molecules remain, and some groups attach at undesired locations on the base. Chemical processes attempt to maximize desired products by controlling reaction conditions and by employing catalysts to shift the natural equilibrium toward the desired product.

Yields are nevertheless inherently limited by the specific chemistry involved. Again for dyes, each individual pigment group addition generally has a maximum efficiency of from 40 to 65%, well below the proposed 95%. Furthermore, the overall efficiency of the synthesis process is the product of the individual process steps. For example, a relatively simple dye requiring three process steps each having an efficiency of 50% would have an overall maximum inherent efficiency from base molecule to finished product of only 12.5% (.50x.50x.50). The throughput efficiency calculated for any section 313 substance used in such a multiple-step process would be similarly constrained by the maximum inherent process yield.

PROCESS 3:

Materials that are recycled and reused in the process, such as solvents, catalysts, and reactants, will also not meet the standard unless they are accounted for as production throughput each time they are reused. (See discussion below regarding recycling.) For example, many essential chemicals, including engineering plastics and synthetic rubber, are synthesized within a process diluent and solvent. In continuous processes, the product is separated and recovered from the diluent during each "pass" through the process. Although the diluent is not part of "production throughput" small amounts are lost through fugitive emissions and other unavoidable releases. In such cases, losses are always higher than throughput, and an efficiency standard cannot be met.

PROCESS 4:

Ingredients that are used in the waste treatment process may also not meet the efficiency standard. Many acids and caustic materials are listed under SARA Section 313. Such materials are often used as raw materials to neutralize or treat other wastes, being 100% consumed in the process. The neutralized wastes produced from such reactions may themselves be SARA Section 313 materials. For example, sulfuric acid may be used to neutralize a caustic wastewater stream prior to further treatment or discharge. In the process, a sodium sulfate solution is produced. The sulfuric acid and caustic wastewater do not end up in the product but are entirely managed as a waste; thus, a 5% release limit is unachievable.

PROCESS 5:

Processes that necessarily produce unusable isomers to obtain usable isomers will not likely meet the standard because the unusable isomers will be waste. For example, some chemicals are position isomers that differ only in the configuration of the molecule. Consider 1-nitropropane and 2-nitropropane. These two compounds are very similar except that the nitro-group in 1-

nitropropane is attached to the first atom on a string of three carbon atoms in a molecule. In 2-nitropropane, the nitro-group attaches to the middle carbon.

In a chemical synthesis to make 1-nitropropane, the laws of chemistry require that a certain amount of 2-nitropropane will also be produced. If there is no market for 2-nitropropane (which is a SARA Section 313 chemical) it must be disposed of or destroyed after separation from the 1-nitropropane product. The "release" could approach 100%. This will be the case with the many position isomers on the SARA Section 313 list.

PROCESS 6:

Additionally some raw materials contain naturally occurring contaminants that are unusable and must be discarded. As an example, one of our member companies operates a process to manufacture food-grade phosphates. Such products have broad applications in foodstuffs, cleaning compounds and dentifrice applications, as well as other uses.

A primary raw material to the process is technical phosphoric acid. This material is necessarily derived from a mineral source and contains a level of arsenic which, if not removed, would cause an unacceptable level of arsenic in the food-grade product. In fact, over 97% of the arsenic is removed by refining and is disposed of as a waste material. In this situation, a limit of 5% of the SARA 313 toxic chemical arsenic in the waste is not achievable.

PROCESS 7:

Another problem may occur with chemical processes that involve multiple reaction steps, possibly with isolation (refining) of the reaction products after each reaction step. Such operations may occur sequentially in the same facility. The recovery in the final product of a raw material which was introduced into the first step of such a process seldom would meet a 5% loss limit.

As an example, a member company uses a SARA Section 313 chemical as a raw material in a reaction to make intermediate "A." That intermediate is refined and then further reacted on-site to make intermediate "B," which in turn is used to derive product "C." Product "C" is the product that leaves the plant site, after final purification.

Because of the nature of the complex chemistry involved and because the process requires three synthesis steps, the overall chemical yield on the Section 313 chemical is limited to 87%. In other words, 13% is lost to waste streams which are disposed of responsibly. Unless the efficiency standard is calculated for each step in the process, the process will fail the standard.

The Waiver Procedure Will Provide Little Relief For Processes That Cannot Meet The Efficiency Standard.

S.2773 provides a waiver procedure for these processes that cannot technically meet the efficiency standard. Specifically, under Section 305(a)(3), EPA may waive the standard if four conditions are met: (1) the standard is technically infeasible; (2) the plant can account for every release of every toxic chemical or install continuous monitoring capable of detecting every release; (3) all minimization procedures have been adopted; and (4) all releases are in compliance with applicable permits. Criteria (2) and (4) of this waiver provision are unrealistically stringent and will likely result in EPA seldom, if ever, issuing a waiver.

Criterion (2) -- account for every release or install continuous monitoring -- is unrealistic since no plant can account for every release, especially *de minimis* releases. Since every release cannot be accounted for, continuous monitoring would be required, but that too is not technically or economically feasible. We explain this concern in much more detail below.

With respect to criterion 4 -- releases must be in compliance with all permits. There will always be an occasional instance of a release that exceeds a permit limit. These will occur whether the plant is large or small, well-managed or poorly managed. In fact, NPDES permit limits are established based on historical performance and are set at levels exceeded 1% to 5% of the time. Thus, NPDES permit limitations are expected to be exceeded during the life of the permit. A categorical requirement that a waiver cannot be issued if there is a single incident of permit non-compliance, regardless of materiality, will result in few, if any waivers being granted.

In addition to the waiver criteria being unrealistically stringent, waivers are seldom timely, are resource intensive for industry and EPA, are expensive to prepare, and often take a back-seat to other agency priorities. The more often the 95 percent efficiency standard is technically infeasible, the more often the waiver procedure will have to be relied upon. This could be a major administrative drain on both EPA and industry.

The Efficiency Standard Cannot Be Accurately Measured. Continuous Monitoring Is Infeasible.

The efficiency standard will not be useful unless, at a minimum, it can be accurately measured. S.2773 seems to assume reliable measurement can be accomplished through either a mass balance or continuous monitoring. We seriously doubt whether mass balance is feasible, and we know that continuous monitoring for all releases is infeasible.

As noted at the beginning of this discussion on Title III, the NAS mass balance report should shed light on the measurement reliability of mass balance; Congress should await that report before imposing an efficiency standard that is predicated on reliable measurement.

Moreover, efficiency measurements cannot be reliable if the underlying release calculations are themselves not very accurate. EPA recognized in designing the Section 313 reporting requirements that exact measurement of releases is often impossible. EPA therefore allows estimates based on best engineering judgment to be made in the Section 313 reports. EPA announced in its press releases on Section 313 reporting that Section 313 release reports should be considered to be accurate only within one order of magnitude. Since imprecise estimates, more often than not must be used, it will be hard to determine with certainty whether a process achieves a 95 percent efficiency standard.

As an alternative to mass balance, S.2773 seems to propose a simplistic solution -- continuous monitoring for all releases throughout the process. *See* Sections 305(a)(6), (b)(1) and (b)(2). The Sections require "continuous emission and environmental monitoring equipment capable of detecting *all* losses to the environment through spills, leaks, discharges, dumps releases or emissions of .... 313 toxic chemicals," (emphasis added). This would seemingly be required of any facility unable to account for any toxic chemical as product or permitted release -- in essence, for any situation where the chemical cannot be mass balanced.

Continuous monitoring would be enormously expensive and is not technically capable of achieving the objective of monitoring all releases. Releases conceivably can occur at any point in a process (from tanks, pipes, flanges, columns, storage areas, transportation areas, waste units, etc.). To fully measure releases, monitoring devices literally would be required at each conceivable release point. Additionally, monitoring devices are only capable of measuring a specific constituent or a limited group of constituents at a time. Thus, if many different 313 chemicals are present, many different monitors might have to be placed at each conceivable release point to gauge all potential constituent releases. Although fugitive emissions can be estimated by bagging valves, pump packing glands and pipe flanges, no technology exists to continuously monitor because the location and/or time of releases cannot be predicted. Likewise, spills can at best be estimated by inventory difference or engineering estimates. Finally, not all Section 313 toxic chemicals are capable of analytic detection. Would one have to assume that a release is occurring in such a case?

Another concern is that Section 305(b)(1) could subject an owner/operator to criminal penalties and imprisonment if he does not install a continuous monitoring system that is "capable of detecting and reporting all emissions ...." Subjecting someone to possible criminal sanctions for not doing what cannot technically be done is inappropriate.

The point is that even if one agrees with the objective of an efficiency standard, why require it if it cannot be accurately measured? EPA and the regulated community should not be required to go through an enormous administrative and accounting exercise if the results will not be reliable. The regulated community must first develop plans to quantify the efficiency standard under Section 304(a)(4). EPA must approve those plans. The regulated community must then measure all inputs, outputs, releases, etc. from each process and for each toxic chemical. The regulated community must then report that information to EPA. EPA must then analyze, compare and make conclusions based on that information. If the data is not sufficiently accurate, why go to all the trouble? This process is very resource intensive for both parties and those resources could be spent more productively.

The Production Efficiency Standard Is Not Well-Defined.

Section 301(a)(1) provides that the Administrator shall:

> establish a national performance efficiency standard for industrial waste generators in SIC's 20-39 requiring within 10 years that total hazardous residuals including emissions, effluents, spills and managed wastes will not exceed 5 percent of production throughput. (Emphasis added.)

Somewhat differently, Section 305(a) provides:

> . . . . the release to the environment of more than 5 percent of production throughput of hazardous substances by any person required to file a toxic chemical release form under section 313 of the Superfund Amendments and Reauthorization Act of 1986, shall be unlawful.

Except for the reference to "hazardous substances," the second quoted provision appears to focus on SARA Section 313 toxic chemical emissions. In contrast, it is unclear what would be the focus of Section 301(a)(1). What are "hazardous residuals?" Section 301(a)(1) says they include emissions (presumably Section 313 toxic chemical emissions), effluents (presumably surface water discharges), spills (of what?), and managed waste (RCRA hazardous and/or nonhazardous waste?). Answers to these questions and consistency between the two provisions is necessary.

Further, the reference to "hazardous substance" in Section 305(a) is confusing if it means a CERCLA hazardous substance. CERCLA hazardous substances are broader than Section 313 toxic chemicals. Again, a clarification is necessary.

Finally, but most importantly, "production throughput" is not defined. We understand that this term may mean what it means in the background paper NRDC prepared regarding the efficiency standard. There it means the total of Section 313 toxic chemical consumed on-site, the amount shipped off-site, and the amount released to the environment.

Assuming this is correct, it does not answer the critical question of how materials that are recycled and reused are to be counted. If, for example, a solvent is recycled and reused several times before it can no longer be reused, does the manufacturer count the volume of the solvent as production throughput each time it is reused? If he does not, then the solvent can never achieve the efficiency standard. This is because none, or very little, of the solvent would be in the product, and it would be considered a waste. It is thus crucial that recycled materials be counted each time they are reintroduced into the process. S.2773 does not address this issue at all.

To summarize our views regarding the efficiency standard, CMA has serious questions about its efficacy. At the very least, Congress should await the NAS mass balance report before proceeding further with this concept.

There Is No Need For Additional Authority to Regulate Products.

Tacked on to the end of the Title dealing with waste reduction and recycling is an alarming proposal regarding product regulation. Section 310 of S. 2773 would authorize EPA to engage in largely unbounded product regulation. Not only is this a dangerous delegation of authority, but also it is unnecessary.

Restrictions on waste management, such as the stringent Subtitle D program and the recycling incentives in S. 2773, will mitigate environmental harm from products. To the extent that such "end-of-pipe" controls are inadequate, Section 6 of the Toxic Substances Control Act (TSCA) provides EPA with ample authority to eliminate residual risk in products. End-of-pipe regulation with residual TSCA authority is a far more judicious Congressional approach than giving EPA largely unbridled authority to regulate products.

To illustrate the unbridled discretion, Section 310 directs EPA to establish a "hit list" of ten products a year which contain hazardous substances that present a risk to human health and the environment when incinerated or disposed. Before EPA identifies the "hit-list" it must determine the extent to which hazardous substances are contained in all products in U.S.

commerce, surely an enormous task for EPA. Most importantly, S.2773 provides no criteria to EPA for judging whether a product should be on the "hit list." EPA could arbitrarily attach a damaging stigma to ten products every year even though there are no reasonable grounds for this stigma.

Equally unbounded is the authority Congress proposes to give EPA in Section 310(b) to regulate products based on the disposal or incineration of such products. No criteria are set forth by which EPA or a reviewing court are to measure the reasonableness of such regulations. Contrast this carte blanche authority in Section 310(b) of S.2773 with that of Section 6 of the TSCA. There, EPA must consider the following four factors and publish a statement on each before imposing regulations including disposal regulations, on a chemical product. The factors are:

> (A) the effects of such substance or mixture on health and the magnitude of the exposure of human beings to such substance or mixture,
>
> (B) the effects of such substance or mixture on the environment and the magnitude of the exposure of the environment to such substance or mixture,
>
> (C) the benefits of such substance or mixture for various uses and the availability of substitutes for such uses, and
>
> (D) the reasonably ascertainable economic consequences of the rule, after consideration of the effect on the national economy, small business, technological innovation, the environment, and public health.

Again, it is inappropriate to assign EPA such unbridled discretion to establish a hit list and regulate product disposal. No additional product authority is needed.

TITLE IV: WASTE MINIMIZATION REVENUE ACT OF 1988

Assuming A Packaging Tax Is Necessary, The One In Title IV Must Be More Fully Defined Before CMA Can Comment On Its Impact

S. 2774 (and Title IV to S. 2773) would attempt to encourage the recycling of used packaging materials and containers by imposing an excise tax or user fee on certain "virgin material used in packaging" and on "rigid containers." Unfortunately, S. 2774 provides only the minimal outline of a taxing concept rather than a fully developed bill to amend the Internal Revenue Code. Until the tax is more fully developed, it is difficult for CMA to comment on its merits. Nevertheless, we have serious doubts as to whether such a tax is necessary, particularly given the ample incentives that currently exist to promote waste reduction and recycling.

Although S. 2774 provides rates of the proposed tax or fee, it lacks three other basic elements of an administrable excise tax or user's fee:

- The taxpayer or user is not identified;
- The product, substance, or commodity subject to the tax or fee is not clearly defined; and
- The taxable event is not specified.

1. The taxpayer or user is not defined.

S. 2774 does not identify any taxpayer, user or class of taxpayer or users who would pay the proposed tax or fee. Although presumably the tax would apply to manufacturers of "virgin packaging materials" and "rigid containers," the tax could also apply to each use of these materials and containers in the distribution chain from manufacturer to ultimate consumer.

Moreover, any attempt to narrow the class of potential taxpayers or users by reference to Standard Industrial Classification (SIC) Code designations is defective upon its face. SIC Code designations are voluntary, statistical reporting classifications and often the same manufacturer may have operations involving several reporting categories. These classifications, while useful for broad statistical analysis, simply do not provide any clear guidance of who should or will pay the tax.

2. The taxable product, substance or commodity must be clearly defined.

Section 3(b) of S. 2774 would impose a tax of $7.00 per ton on "virgin materials used for packaging" and a tax of $.07 per "rigid container." Section 4(a)(1) further limits the taxable product to "virgin material which is manufactured by an industry classified in the following industrial classifications . . .." This reference to standard industrial classifications to provide the definition of taxable materials is defective in this instance for the reasons stated above. The industrial classification are voluntary, statistical reporting classifications and do not provide the precise definition required for tax administration and payment. Moreover, the definition of "rigid container" in section 4(a)(2) is incomplete. Thus, neither "virgin material used in packaging" nor "rigid container" provides any reasonable guidance of specific products and substances that will be subject to tax.

3. The taxable event is not specified.

The bill also fails to provide a taxable event. It does not specify whether the tax would apply to the importation, manufacture, sale or use of any designated product. In the absence of information on what event would be subject to tax, CMA is unable to comment on the potential economic burden or relative fairness of the proposed tax.

CMA believes that S. 2774 in its present form is a conceptual outline to promote discussion on the need for and structure of a revenue proposal to finance the objectives and programs of S. 2773. At this conceptual stage, CMA offers its April 26, 1985 statement to the Senate Committee on Finance (pp. 16-17) on standards to assess tax proposals to fund the Superfund cleanup program. This statement is relevant because CMA would assess the proposed environmental tax on similar grounds.

> CMA believes that any broad-based tax to finance the Superfund program should be tested under the following basic criteria:

- Revenue Potential

  The proposed tax should provide predictable and adequate levels of revenues to finance the cleanup of problem waste sites.

- Equity

  The tax must be very broadly-based. EPA identification of responsible parties at National Priority List (NPL) waste sites has demonstrated that numerous industries, and over four thousand companies, have contributed waste to these problem sites. Fairness dictates that all these industries should also contribute to the cleanup of these sites through their tax payments.

- Trade and Economic Impact

  Any proposed tax should have a neutral or minimal impact on trade. The tax should not apply to exports. It should apply to imports or be imposed at such a low rate that it does not disadvantage domestic manufacturers with respect to imported products.

- Avoidance of Repetitive Taxation of Same Transaction

  The proposed tax should avoid any repetitive taxation of the same transaction ("cascading of tax payments").

- Environmental Nexus

  Any proposed tax should have at least some environmental nexus with the problem waste sites for which the tax is required. Since a wide spectrum of manufactured products appears at problem waste sites, a tax that would apply broadly to manufacturing would supply the requisite environmental nexus.

- Administrative Feasibility, Cost and Number of Taxpayers Affected

  The proposed tax should be simple and inexpensive to administer and to collect. We believe that a tax which applies to all manufacturers would not impose an undue administrative burden.

CONCLUSION

The very important issues raised in S.2773 merit the extensive testimony CMA has filed today. We appreciate the Subcommittees consideration of our views and we look forward to continuing to work with Congress as RCRA reauthorization evolves.

BROWNING-FERRIS INDUSTRIES

Testimony of

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Divisional Vice President, Environmental Policy and Planning

BROWNING-FERRIS INDUSTRIES

and

Vice President, Environmental and Regulatory Affairs

CECOS International, Inc.

Before the

Senate Environment and Public Works Committee

Subcommittee on Hazardous Wastes and Toxic Substances

in

Washington, D.C.

on

September 26, 1988

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Testimony of Marcia E. Williams, Browning-Ferris, Industries

Introduction

It is a privilege to present testimony today on one of the dominant issues of our day. From the garbage barge in 1987 to the medical waste-befouled beaches in 1988, barely a week passes without a cover story or major coverage by weekly news magazines, network news programs, and local newspapers throughout the country. What's more, it is finally dawning on citizens and policy makers alike that government at all levels must take more enlightened approaches to the encouragement of waste minimization and recycling and the development of integrated solid waste management strategies including siting and permitting of waste management capacity.

We applaud Senator Baucus for introducing S.2773. The entire area of solid waste generation, collection, treatment, and disposal has traditionally been left to state and local governments. However, the need for a stronger set of Federal directives is now clear. S.2773 has done this. It is bold -- undoubtedly in the minds of some too bold -- and aggressive and comprehensive. At the same time, it leaves important decision-making responsibility with the EPA Administrator and the states. This balance should ensure that the legislation will be robust over time and accommodate new information and priorities. We expect the entire process of amending federal law in both the solid and hazardous waste areas to be a fairly complex legislative process. Nonetheless, we feel that the debate is getting off on the right footing.

Browning-Ferris Industries currently operates in forty-five states and in well over two hundred twenty-five congressional districts across the country. BFI is among the largest waste services companies in Montana, New Jersey, Maryland, and Minnesota to name a few, and has substantial operations in Florida, Rhode Island, Wyoming, and Idaho among the many states represented by members of this subcommittee.

BFI is active in each of the different aspects of the waste collection and disposal operations that would be regulated under S.2773. BFI currently has extensive solid waste collection operations throughout the country and is one of the nation's major owners and operators of municipal solid waste landfills. BFI's recycling activities represent an increasingly important component to our waste collection efforts throughout the country. BFI is one of the most prominent members of the resource recovery industry, which includes vendors of plants that convert waste into energy through the combustion process. Through a subsidiary, BFI is a major company in the hazardous waste treatment and disposal business as well. Finally, and of particular note recently, BFI is by far the leading company in the collection, treatment and disposal of all forms of biomedical, or infectious, wastes.

This testimony begins by addressing the critical need for infectious waste legislation. We have included some of the important observations which BFI has developed based on our major involvement in infectious waste collection, treatment, and disposal. The testimony will then address State and Regional Solid Waste Planning, Permits for Disposal of Solid Waste, Solid Waste Landfill Design Requirements, Municipal Waste Combustor Regulation, Waste Reduction and Recycling Goals, Hazardous Constituents in Products, and Fee Structure. We have not addressed hazardous waste issues in this testimony but BFI will be pleased to provide those observations at a later date.

In your invitation letter you asked BFI to specifically address four key points. Brief responses are provided below and are supplemented throughout the testimony.

- Permanent Financing Mechanism -- BFI supports the packaging fee mechanism included in this bill. If necessary, over time, this can be supplemented with general revenues or other generator-based funding schemes.

- Regulatory Alternatives -- The general regulatory framework established by this bill is on target. Our testimony suggests minor modifications which can expedite permitting and information gathering. Our testimony also suggests the need to consider mechanisms which will ensure a smooth transition period while the provisions in the bill are phased into effect.

- Enforcement/Compliance -- This is the most difficult and challenging aspect of the legislation. Without comprehensive and uniform enforcement, the legislation will not achieve its important goal. BFI suggests that Congress consider a range of potential third party (independent) audit mechanisms to ensure that both facilities and states comply with the requirements of this bill. BFI will continue to develop this concept further.

- EPA Responsiveness -- Adequate funding along with clear legislative priorities should suffice.

INFECTIOUS WASTE

BFI's medical waste operations span the country, from Boston to Fort Lauderdale, from New Orleans to Phoenix, from Los Angeles to Portland and many points in between, including Memphis, Cleveland, Atlanta, and Baltimore. Just three years ago, we operated in only two states. Today, we collect or treat infectious waste in forty-two states. BFI strongly encourages tough and effective regulation of the collection, treatment, and disposal of infectious waste, at the Federal, state, and local levels. Without tough regulations, there is simply too much opportunity for misunderstanding, confusion, and mischief in this area.

Nature of the Problem

Infectious waste has surfaced as an issue recently for three main reasons. First, potentially injurious objects are more likely to be discarded than in the past. One can easily recall the not-too-distant past when medical items such as syringes and needles, which today are disposed of after a single use, were sterilized and reused. The used needles and syringes now washing up on the beaches of New York and New Jersey, to the extent they originated in medical offices or hospitals, would simply not have been discarded many years ago.

There are at least two important consequences of increased use of disposables. Many of these disposable items are now being burned in hospital incinerators originally designed for pathological waste (body tissue) only. The high plastic content of these items may cause problems with the incinerator equipment as well as potential air quality problems for the surrounding environment. In addition, disposables that are not differentiated from the conventional solid waste disposal stream are contained in everyday municipal waste and may also end up at landfills, where they pose a threat to waste haulers and landfill workers.

Secondly, there is a major trend toward providing healthcare services away from the hospital, at out-patient clinics, surgical centers and the like. While hospitals typically have had on-site treatment capabilities, these new smaller healthcare providers have no on-site options. The local dumpster has become the only convenient disposal option. Even if the hospital were to provide treatment for these smaller facilities, transportation and tracking requirements are a must.

The third main reason for the emergence of the infectious waste issue stems from the undeniable public concern over communicable diseases. The public's unease associated with communicable diseases, whether scientifically justifiable in every case or not, must be addressed as regards the potential risk from waste. The specter of contracting various diseases by coming in contact with infectious waste materials such as needles and syringes has captured the media's attention enough to prompt state and local governments to act.

The generators of infectious waste that come most readily to mind are hospitals, nursing homes, and laboratories. Some states, in fact, have restricted the reach of their infectious waste legislation to cover only such facilities. There is no dispute, however, that the universe of generators is far more extensive, and includes medical buildings, urgent care clinics, physicians and veterinarians offices, mortuaries, and indeed even private homes. Infectious waste legislation is only as effective as its comprehensiveness.

While the public's greatest fear clearly focuses on the risk of contracting AIDS, hepatitis B is in fact a far more serious documented risk at present. An average of 200 health care workers alone die annually from contracting hepatitis B in the work place. Therefore, even if the AIDS epidemic were miraculously to abate, the need for effective infectious waste regulations would remain pressing.

Who Is At Risk

As a national company with employees functioning at every step in the waste collection, handling, and disposal chain, BFI is concerned about the welfare of its workers. And for good reason. Solid waste collection personnel -- for municipal waste collection services as surely as for private companies -- risk injury any time a plastic bag of municipal waste they throw into a waste collection vehicle contains a used needle. Granted, the risk during any one day to a worker is not significant. However, the risk is surely not insubstantial.

Waste haulers get splashed with blood when compacting waste from hospitals, waste that should have been segregated out. Landfill operators, similarly, who must monitor and often traverse the working face of a landfill, are themselves exposed to the possibility of needle punctures or other contamination risks at the landfill. Even maintenance personnel who merely work on maintaining our trucks must concern themselves with the possibility that contaminated needles become lodged in the intricate hydraulic equipment which must be handled directly if it is to be maintained properly.

A welder at one of BFI's maintenance shops for trucks that are supposed to receive only standard municipal solid waste recently was working inside the truck. When he leaned back to support his weight, a glass blood tube broke, shoving blood-covered glass into his hand. A subsequent examination of the truck found other intact blood tubes, one of which was marked "HIV." This incident, only one of many in which BFI solid waste personnel have exposures to untreated medical waste, points up both the improper practices of our customers (who are directed by BFI not to put medical waste in regular trash containers) and the potentially tragic situations solid waste handlers and vehicle maintenance personnel face.

When a dentist puts used needles in a plastic bag, and one of the needles later lodges in the waste hauler's shoulder while he is emptying the dentist's trash container, it is clear that more than our shores are at risk. Likewise, within the past two years, a human arm and leg were spotted in a BFI landfill in Oklahoma. When BFI's manager met with the state and city health department officials to get them to prohibit untreated medical waste from solid waste landfills, the health officials rejected the suggestion. When BFI decided unilaterally to prohibit medical waste from our landfills, some of our competitors eagerly went after the very business we rejected.

Of course, employees in the waste services industry are only a small subset of the universe of people potentially at risk from the mismanagement of infectious waste. Of late, the mismanagement of infectious waste has manifested itself in a profound fashion on the beaches of New York and New Jersey. Reports suggest that the medical waste washing up on those beaches comes from a combination of sources -- junkies, sewage overflow, and, not incidentally, the improper handling of infectious waste, principally by generators. While the great weight of evidence suggests that the public faces little if any risk of contracting diseases by virtue of encountering used needles or, indeed, even vials of contaminated blood on the beaches or in the oceans, who among us wants to take even that small risk.

The mismanagement of infectious waste is by no means limited to our nation's shoreline, however. Just last summer, two celebrated instances of public exposure to discarded medical waste first highlighted the possibility of danger. In Youngstown, Ohio, and in Indianapolis, Indiana, children were found playing in trash dumpsters behind medical buildings. In one case, children poked themselves with used needles in a game of "doctor." In the other, broken vials of contaminated blood splattered over children playing amidst such waste. Fortunately, tests to date have shown that none of the children involved in these incidents has become infected.

Appropriate Precautions for Proper Management of Infectious Waste

In our view, the focus of any regulatory effort, whether through the EPA or OSHA, must be the requirement that infectious wastes be separated from other solid wastes at the point of generation and remain segregated until treatment. Moreover, they must be containerized properly to minimize the risk of exposure to health care workers and infectious waste workers alike, as well as the public.

The first line of defense against occupational exposure to infectious waste is to ensure that any regulations reach as many generators of infectious waste as possible. In addition to seeing that the regulations are sweeping, regulators should do their utmost to see that these generators take every precaution to segregate their truly infectious waste and to place this waste in proper containers prior to being picked up by a transporter. On-site treatment should be subject to the same standards as off-site treatment.

Typically, when BFI contracts with an infectious waste customer, we will first furnish such facilities with specialized containers to guard against the risk posed by needles, scalpels, infected tissue, dressings, and other articles used in a medical setting that by their nature, presence, or contact result in potential contamination with infectious agents. These might include puncture-proof containers for "sharps" and specially identified boxes for the waste. These specialized containers should invariably be required for use within the facility that generates infectious waste, ideally as close to the point of generation as possible. For example, the puncture-proof container for "sharps" should be in the doctor's office or other location at which needles are thrown away, rather than at some point removed from the point of being discarded. The further the specialized container is removed from the point of discard, the greater the likelihood for accidental exposure.

BFI makes periodic stops at facilities it services to remove these specialized containers containing infectious waste. We transport these containers in specially designed trucks that reduce the risk of contamination. The waste is taken to an appropriate treatment facility. There are presently two primary methods for treating infectious waste. One is incineration and the other is autoclaving, which is a steam sterilization process that also applies pressure at high temperatures, all of which serves to render pathogens nonviable. Incineration and autoclaving are both sound, acceptable treatment options for different types of infectious waste. In our view, it is typically unwise for a law to require one method over the other.

The cost to the generator of infectious waste that would utilize such containment and collection measures as are furnished by BFI and other reputable companies is immaterial in the overall scheme of hospital costs. This is especially so when one factors in the savings in occupational injuries avoided by taking appropriate precautions.

Proper containerization at the point of generation will do the most to safeguard workers. In tandem with our efforts to encourage generators to use proper containerization methods, however, BFI believes that personal protective clothing and equipment is appropriate for employees of infectious waste hauling and treatment companies. Those individuals, who, like health care workers, routinely come in contact with substantial quantities of infectious waste, should be required to follow "universal precautions" (to use the Centers for Disease Control designation). These precautions consist of the use of gloves in all cases and gowns and protective eye wear when the likelihood of direct exposure to blood or other bodily fluids is anticipated. Additionally, hands should be washed immediately and thoroughly both after exposure and when gloves are removed.

One area that poses a specific concern is the countless number of needles and syringes that are disposed of, not only by health care facilities, but by home health agencies and individuals in their homes. We are not suggesting that these all be regulated. We have explored options, however, regarding how to curb the problem of needle disposal throughout the solid waste stream. It seems plausible that there could be developed some method to track the dispensing and disposal of needles by the distributor or manufacturer. Pharmacies, for example, could provide sharps containers when dispensing needles that are then returned full with the next prescription. Perhaps there could be a deposit system to assure return of used needles. It would be much easier to manage the disposal at a central collection point then to manage it once the item is disposed of.

The volume of infectious waste generated in the United States each year is uncertain. Some published reports suggest that the volume could be as high as 700,000 tons per year. Of that amount, only a tiny percentage is subject to the thorough management practices that BFI and other capable medical waste companies routinely follow.

State and Local Developments Regarding Regulation of Infectious Waste

State and local regulation of infectious waste is not all of a recent vintage. California has regulations going back to 1962 requiring that needles and syringes be rendered unusable prior to disposable. Oregon, in contrast, still has no statewide law in place to protect the public from improper disposal practices.

State and local governments have moved quite erratically in the infectious waste area. At present, roughly 40 states have or are in the process of developing infectious waste legislation or regulations. Just within the past two years, New York, Louisiana, Missouri, Ohio, Indiana, and Texas, among others, have enacted state infectious waste legislation. BFI has pressed vigorously for tough regulations by states throughout the country.

It is our opinion that Ohio has passed one of the most comprehensive laws for the regulation of infectious waste. It includes a good definition of infectious waste, requirements for packaging, storage, transportation and a tracking system. The promulgation and implementation of these regulations will do a great deal in alleviating the problem of mismanagement of infectious waste in Ohio. However, there are some loopholes in this system which need to be addressed; first of all there is a small quantity exemption which still allows for anyone disposing of less than 50 pounds of infectious waste to merely put it in the solid waste stream. Laboratory cultures (of any quantity) must be treated under the new regulations. Needles and sharps, however, need only be packaged, but still may go to the local dumpster. Secondly, it does not require hospitals which treat on site to have an operating permit, which is required of off-site treatment facilities.

We believe that all generators of infectious waste, regardless of quantity, should be required to dispose of that waste in the same manner. As has been seen in many instances, it is the small quantity generators that present a problem. It should be noted that a doctor's office or medical clinic can dispose of its infectious waste properly for as little as a dollar a day. We also believe that all treatment facilities, whether on site or off site, should be required to have the same permit and to operate by the same standards.

The other states' efforts have varied widely. For example, New York and New Jersey just passed emergency regulations which implement transportation and tracking requirements. These will certainly make a stab at addressing their problems. What we are ending up with, however, is a patchwork of regulations throughout the country which makes it difficult for companies like ours to operate in many states and transport waste from one state to another.

For instance, in the Northeast, we operate in New York, Massachusetts, Rhode Island. All these states are implementing manifests which differ greatly in content. Additionally, the reporting time in New York is 15 days, and in Massachusetts it is 30 days. We transport some of the waste from New York to our incinerator in Rhode Island, which can only treat one type of infectious waste. The manifest used in New York, however, does not specify types of waste. These are some of the reasons we strongly urge some uniformity among the states.

In our view, the weaknesses in most state regulations involve less than comprehensive coverage, poor definitions so as to include less waste than necessary, exemptions for on-site facilities, and poor enforcement mechanisms. Hospitals tend by and large to follow reasonable precautions more frequently than do other generators of infectious waste. The tendency, however, to exempt hospital incinerators from rigorous state air quality regulations -- indeed, often from the entire permitting process

-- is, in our view, a mistake. Hospital incinerators tend to be located in the middle of urban areas. Many tend to be old, and new ones often are not built with modern pollution control devices. Because hospital incinerators are often built with pathological waste in mind, when they burn plastics and other kinds of non-pathological infectious waste, they tend to do so rather poorly. It is imperative that infectious waste regulations, certainly with respect to incineration, must apply equally to on-site as well as off-site facilities.

The unevenness of state infectious waste laws has the obvious potential for creating havens for improper practices. Unscrupulous infectious waste haulers will tend to dispose of their waste where they can do so most cheaply. Only the promulgation of minimum federal standards will guarantee that the low water mark will not be so low as to both jeopardize public health and also create incentives for waste generators and haulers to escape decent practices.

Need for Federal Standards

We are strongly of the view that the time for federal standards for regulating infectious wastes has already arrived. To those who ask, "Where are the bodies?", we answer, "They are already there" in the persons of the scores of hepatitis B victims.

In our view, federal infectious waste legislation should operate from certain fundamental principles. We most strongly believe that infectious waste, for example, should not be regulated under Subtitle C of the Resource Conservation and Recovery Act, the federal hazardous waste provision. Infectious waste poses a hazard, no doubt. But it is a hazard completely different from the human health and environmental hazards posed by the wastes with the characteristics commonly associated with hazardcusness -- ignitability, corrosivity, reactivity, or toxicity. Indeed, infectious waste is at least as much of an occupational risk as it is an environmental risk. If a federal role is ultimately deemed necessary in this area, OSHA should have as much of a role as EPA in formulating regulations.

BFI believes that some sort of tracking document, from the point of generation up to the point of treatment and disposal of infectious waste, is necessary. Such a tracking document is akin to the "manifesting" that is used in connection with hazardous waste, but it would not include the tremendous administrative burden of paper processing associated with manifesting. Nor, because infectious waste is a more homogeneous waste than hazardous waste, is manifesting necessary from a health or environmental standpoint.

BFI actually uses a "bar code" method for tracking infectious waste. At the generator's facility, BFI applies a bar code which identifies the generator and volume. That bar code stays with the waste until the point of disposal. Such a tracking system, if required of all generators, would surely make it difficult to illegally dump hundreds of vials of contaminated blood products, as reportedly was done by laboratories in the New York-New Jersey area recently.

The management system required by any set of regulations must be sweeping. All sizeable generators must be covered. This applies particularly to, say, medical buildings, where no one doctor's office might generate substantial quantities of infectious waste, but in the aggregate, the volume of infectious waste produced could rival that generated by a hospital. The risk to the public from that waste coming from the hospital or the entire medical building is indistinguishable. Indeed, even a small quantity exemption must be used very carefully, if used at all. As the incidents last summer in Youngstown and Indianapolis testify, it does not take much infectious waste (in contrast to solid waste and even most hazardous waste) to pose a health risk.

The infectious waste provision of S.2773, though fairly brief, appears to address quite well the current problems that arise in connection with infectious waste treatment and disposal. The requirements for segregation of infectious wastes, state-of-the-art treatment (either incineration or sterilization), permitting, and tracking are the essential components of a sensible federal program. We believe that the current public concern over infectious wastes merits prompt attention. While it seems improbable given the dwindling number of days in this session of Congress, we continue to urge passage of legislation promptly. Our concern is that as the beaches become a distant summer memory, the urgency of the problem may fade as well. We know all too well that this is not a beach problem but is a year-round problem that must be dealt with, and dealt with soon.

Ideally, states should have to face some fixed time deadline for putting minimum infectious waste programs into place. The hammer might be that the guidance already written by the EPA in the infectious waste area would apply automatically after the expiration of the time deadline and could be federally enforceable. The suggestion of yet another federally enforceable environmental program is not made lightly, but it may be the best alternative available.

Additional Role for EPA

The EPA should certainly be in a position to provide technical assistance, education, and information to the states in helping the states to develop their own infectious waste programs. For example, the EPA might be in a good position to develop model regulations for states or develop model small quantity generator education programs. The EPA should particularly focus on developing guidance or pilot programs in difficult areas such as rural infectious waste management, take-back/deposit systems for sharps, and household infectious waste collection programs. They should report back to Congress on solutions to these and similar issues.

Developing Needed Capacity

Finally, Congress cannot overlook one fundamental issue that has overreaching implications for the disposal of any type of waste -- that is, the Not in My Backyard syndrome. Treatment and disposal facilities for all types of waste are often unwelcome by communities. Infectious waste facilities are typically no exception. BFI and other companies in the field are frequently rebuffed in efforts to site and permit infectious waste treatment facilities. The greater the number of such facilities, the less the likelihood would be for long-distance travel of infectious waste from the point of generation to the point of treatment and disposal. This in turn would reduce the cost, which in turn would reduce the incentives for improper disposal practices.

The starting point in ensuring adequate, well-managed capacity is a strong waste-specific planning process as is laid out in this bill. The planning process must be able to differentiate between all existing capacity and good quality capacity. Once this planning process has occurred, both carrots and sticks are needed to help overcome the NIMBY problem. The carrots might include some financial or tax incentives for communities to site waste disposal facilities. The sticks might be some penalties, such as withholding of available related funds or resources, from states that refuse to site disposal capacity.

Congress must understand that simply to enact infectious waste legislation does not genuinely address the problem if states and communities are unwilling to permit the construction of state-of-the-art infectious waste treatment and disposal facilities.

STATE AND REGIONAL SOLID WASTE PLANNING

As stated previously, S.2773 makes essential strides in the area of state and regional solid waste management planning. It is no secret that most states and communities have failed rather miserably in long-range planning for disposing of the solid waste they generate.

The twenty year capacity planning requirement is a major step forward. So is the requirement that capacity meet Section 4010 standards in order to "count." Such provisions will have many salutary effects. First, and most basically, such requirements should provide the states with the incentive necessary to overcome the constant localized objections to siting well-designed waste disposal capacity. The provision granting the state authority to take actions necessary to assure capacity is a particularly crucial measure. Indeed, our view is that there must be some rather concrete ability on behalf of state planners to override localized NIMBY concerns. It is this "gorilla in the closet" which will allow a state to develop an effective, interactive siting process with local communities and citizens.

The sanctions for failure to submit a state plan are novel in the context of federal solid waste laws and, in our view, much needed. The experience to date has been that state planning and, indeed, enforcement of solid waste laws has been uneven at best and rather minimal. In large part this is because states pay no immediate or appreciable penalty for failing to plan or enforce adequately. The provision that would withhold grants, loans, loan guarantees, licenses or permits for activities that contribute to the generation of the solid waste stream appears quite sweeping. If in force, it is likely to make the point quite effectively that states could not ignore the directive to plan adequately.

PERMITTING

Permits for Disposal of Solid Waste

The permitting system envisioned by the bill can also help create a more sensible solid waste management system. The fact is that there are still municipal solid waste land disposal facilities that do not even meet the "open dump" requirements of the solid waste disposal act of 1965. Burning of garbage in some of these dumps continues to this day. Needless to say, the more reputable landfill owners and operators ceased engaging in such practices years and years ago. But the fact that such practices continue speaks to the need for an effective system for assuring the operation of modern facilities only.

The big question, of course, with respect to any federal implementation of the solid waste permitting system is whether the U.S. Environmental Protection Agency will have the resources to issue permits in sufficient numbers to keep the system from gridlocking. Experience to date points to two problems with the permitting process in connection with hazardous waste landfills. One is the simple inadequacy of the resources devoted to this task. Second, officials engaged in permitting seem locked in a paralysis of their own -- they are fearful of making mistakes that will prompt litigation or public ire, with the consequence that they refuse to make decisions at all. Such a situation leads to capacity shortages or prolonged life for older, less desirable facilities while new facilities wait for years to receive permits. If such a paralysis overtook the solid waste disposal permitting process, the entire solid waste disposal system throughout the country could be in for a major shock.

We suggest that EPA should be given the task of looking at specific ways to expedite the permitting process such as the appropriate use of class permits, permits by rule, separate operating/corrective action permits, and hammer dates whereby facilities would be shut down if various stages of the clean-up process had not been reached.

SOLID WASTE LANDFILL DESIGN REQUIREMENTS

We applaud the design requirements that would be established as a minimum for municipal solid waste landfills. What is equally as important as having good minimum standards, however, is that these standards be applied equally to all landfill owners and operators and that enforcement be comprehensive. What we find now, unfortunately, is that municipalities are often held to lesser standards than private landfill operators, either through legislative or regulatory edict or enforcement practices. The problem with this slanted playing field, of course, is that pollution does not respect ownership. We wholeheartedly endorse the bill's apparent recognition that there is no environmentally sound reason to discriminate among facilities.

Among the requirements set for municipal solid waste landfills is one for financial responsibility for closure and post-closure care. We do not take issue with financial responsibility as an essential requirement. We have been troubled, however, by the EPA's efforts in this area in connection with Subtitle C and now proposed for Subtitle D. The existing avenues for obtaining financial assurance are limited and expensive. Moreover, the current approach to financial assurance does not tend to reward good, low risk facilities. Also, the current approach provides almost impossible hurdles for large companies with multiple facilities since the historical approach has been to assume all facilities need closure and possibly corrective action simultaneously.

If municipal solid waste landfills are subjected to the same financial assurance requirements, it is no overstatement to say that any large company required to demonstrate financial assurance of the magnitude proposed will simply not be able to stay in business. The catastrophic losses for which landfill operators must insure are quite unlikely to occur in connection with modern landfills that are located and designed appropriately. Therefore, to require, as the EPA seems intent on doing, that financial assurance be predicated on the assumption of major failures at virtually all facilities simultaneously, is to assume a "worst case" that no expert would suggest is even remotely possible. Congress should carefully consider these issues so as to not allow the financial responsibility requirement to undo the entire solid waste management system.

A word is in order about the nature of landfilling practices today. Modern landfills, those permitted and designed since RCRA was enacted, are as different from old municipal dumps as modern computers are from their earliest predecessors. Teams of engineers, hydrologists, and geologists collaborate today on siting and designing environmentally safe landfills. The very standards required by S.2773 are now being utilized in state-of-the-art landfills, and design features are becoming more sophisticated all the time. The cost of building a state-of-the-art landfill is comparable to the cost of building a state-of-the-art resource recovery facility.

A recent study performed by the EPA found that 85% of sanitary landfills do not have any type of liner in place, and 75% have no groundwater monitoring system. This is a sorry record and points out the need for federal legislation. BFI-owned landfills, in contrast, are either lined with composite or recompacted clay liners (73%) or have at least five feet of in-situ clay (27%), and 98% have groundwater monitoring. The point is not to blow our own horn but to demonstrate that the practices required by this bill are being implemented today in some places. What makes the bill so important is that if implemented and enforced aggressively, the bad actors -- wherever they are and whoever owns them -- will be forced to close and remediate. In the future, the focus will be on prevention rather than remediation.

The value of operators adopting modern practices is evident from the fact that no municipal solid waste landfills, opened since RCRA forbade the disposal of hazardous wastes at solid waste landfills, have landed on the Superfund list. Landfills that today are called municipal solid waste landfills have indeed ended up on the Superfund list, but virtually without exception, those landfills took every kind of waste imaginable a decade ago and beyond, when such practices were not deemed illegal or improper. It is no wonder that such dumps, often operated without regard to hydrogeological factors or the most rudimentary environmental design features, would make their way on to the

Superfund list. Modern landfills should not be expected to follow suit.

Transition Issues

Congress must be mindful of one other major consequence of a sweeping upgrading of municipal solid waste landfill requirements. The system will not change overnight. As the EPA study sited above drives home, most landfills in operation today are substandard. Opening a new landfill can take years, given the time-consuming siting, permitting, and construction processes. Even something as seemingly simple as producing enough of the material used in groundwater monitoring wells and the availability of qualified well installers to satisfy the bills requirements presents a tremendous obstacle.

One unfortunate consequence of moving from no standards to good standards is that "bad" capacity is all too often seen as a short-term solution. Recently newspaper reports in New Jersey, for example, where opening new landfills has become virtually impossible, indicate that the state may well seek to reopen dozens of old, closed landfills. Such a course of action can hardly be in anyone's environmental self-interest. Other states are trying to impose large fees on out-of-state wastes or close borders to out-of-state wastes. These actions arise because of the lack of available local capacity and frustration with the siting/permitting process.

Despite the legitimacy of the frustration, there needs to be a smooth transition period which allows for waste to move freely while new local/state specific capacity is established. This is the best way to ensure that we, as a society, move to higher technology waste management solutions, whether they be recycling, higher technology treatment, or state-of-the-art landfills. S.2773 should consider preempting states' abilities to add special out-of-state taxes (above true cost) or discriminatory limitations during the short window of time needed for all states to complete the planning process and begin to implement the results.

Other Non-Municipal Solid Wastes

This bill has made a major step forward, by addressing the larger universe of industrial non-hazardous waste disposal facilities. These include the pits, ponds, lagoons, and waste piles and other surface impoundments that have heretofore been unregulated and unmonitored. The wastes that are disposed of in these facilities -- what we call "rogue" wastes because they are both harmful and outside the regulated system -- are clearly far more toxic than the solid waste that has received so much attention recently. Their numbers (roughly 200,000+ facilities) dwarf that of municipal solid waste landfills (now numbering about 6000). While this bill does address these facilities, we suggest that the bill could be strengthened if industrial non-hazardous waste and surface impoundments were held to more stringent time deadlines. Also, hammer provisions for obtaining financial assurance, groundwater monitoring, and corrective action assessments should be considered. These hammers could put burdens on some (e.g., location sensitive) or all facilities to begin to phase in key requirements by fixed dates or close.

REGULATION OF MUNICIPAL WASTE COMBUSTORS

BFI believes that the infant waste-to-energy industry has an inescapable role to play in the area of solid waste disposal. We are pleased that S.2773 recognizes that municipal waste combustion is an integral part of any solid waste management system. We believe that setting sensible national standards will help address a certain amount of concern now voiced by community groups in opposition to the siting of modern waste-to-energy plants. We do not share the view of some, however, that setting tough national environmental standards for waste-to-energy plants will break the current log jam in the development of new facilities. Rather, we believe that it is the requirement that states come to grips with their solid waste disposal problems, which this bill also accomplishes, that will more effectively facilitate the development of municipal waste combustion.

BFI has demonstrated its confidence in the waste-to-energy industry in a major way. BFI is a joint venturer with Air Products and Chemicals, Inc. of Allentown, Pennsylvania in American Ref-Fuel, a company which now has seven waste-to-energy projects in various stages of development. Because solid waste disposal capacity is most limited in many areas of the Northeast, most of the Ref-Fuel facilities are planned for construction in areas such as Long Island, Northern New Jersey, Connecticut, and Pennsylvania. As landfill space diminishes and tipping fees soar, BFI believes that environmentally sound waste-to-energy facilities stand to provide substantial relief to residents in the Northeast today and throughout the country in years to come, as the landfill disposal capacity shortage moves south and west.

American Ref-Fuel has the North American license to a time-tested European technology for burning waste and converting it into electricity. Twenty-five years of experience with this technology in Europe convinces us that the waste-to-energy industry is a viable option for solid waste disposal here in the United States. We are confident that the technology poses no unmanageable threat either to the air or groundwater.

Based on the technical data we have seen, the provisions in the municipal incinerator ash section of S.2773 exceed whatever would be considered necessary from a pure environmental standpoint. Rather, they seem to go one or two steps further to help soothe public concerns that often have no foundation in demonstrated environmental harm. We accept that premise, much as we would like to see environmental legislation based on true environmental need.

Nonetheless, the ash provision of the bill needs to be changed at least in three respects. First, we know of no reason to treat all ash before it is disposed of in sanitary landfills, if such ash passes an appropriate toxicity test. No other waste must be treated before disposal if it is deemed non-hazardous pursuant to a test, and we see no reason to discriminate against municipal combustion ash. Second, this bill calls for EPA to promulgate criteria and testing procedures for all potential pathways of human or environmental exposure to constituents of ash. This may well be appropriate, but the EPA admits it does not have the capability for developing such criteria and testing procedures within eighteen months nor has any other institution stepped forward to claim that such testing procedures could be developed in such a short period of time. The result would be to stymie the EPA's development of ash disposal requirements. Third, beneficial reuse of ash in paving or construction materials should not be prevented by the bill. As crafted, the bill does not provide for a reuse of ash that passes an appropriate toxicity test.

With respect to municipal combustion emissions, Congress must approach the issue within the context of what is achievable and practical. Should municipal waste combustors be subject to stringent air emissions regulations? Absolutely. But if we are to have waste-to-energy as part of the integrated solid waste management system, the air emissions regulations must not be so onerous as to be unachievable.

WASTE REDUCTION AND RECYCLING GOALS

BFI applauds the notion of a solid waste management hierarchy contained in S.2773. While the mix of disposal options will differ from one community to the next depending on the proximity of the various disposal options, the hierarchy nonetheless represents a good framework in which to address solid waste disposal options. The goals established in this bill may well be ambitious, but unless we shoot high, we are not likely to accomplish even reasonable objectives.

BFI strongly supports source separation and marketable recycling. Recycling, of course, is not only in our environmental self interest but is quite compatible with our business interests as well. Recycling means increased demand from communities for more and varied collection services. Recycling also enables a landfill operator to preserve increasingly scarce air space. And recycling forces us to confront in an everyday fashion the finite nature of earth's resources.

The bill wisely recognizes that solid waste recycling cannot occur in the absence of incentives to promote recycling both through government procurement and assistance to state governments. Once a community gets involved with recycling, it is essentially in the commodities market, subject to the laws of supply and demand for goods like paper and aluminum cans. Because prices for such commodities are unstable, and because such instability can wreak havoc on municipal government budgets, government intervention to stabilize markets is bound to be necessary. In addition, if communities down-size waste-to-energy plant or ban landfills based on certain recycling assumptions, those assumptions could prove to be dramatically wrong.

FEE STRUCTURE

We strongly support the fee on virgin materials used for packaging as a method for raising revenues to pay for implementation of a national solid waste program. It is obvious to us in the waste management industry and should be obvious to all that the fee imposed closest to waste generation more directly accomplishes the bill's objectives of waste minimization. A waste end tax, in contrast, is too indirect an effort to get a product to cost more and thereby reduce it's production. We find the packaging fee, therefore, to be right on the mark.

HAZARDOUS CONSTITUENTS IN PRODUCTS

Resolving the issues of ash disposal and regulating air emissions, and even determining proper landfill standards, ultimately depends on the nature of objects in the waste stream. We endorse the fact that S.2773 focuses on the issues of source separation and product composition as ways of attacking the root cause of environmental concerns in connection with waste disposal. After all, if the lead in batteries and cadmium from colored printing inks, to pick two prominent examples, were separated from the waste stream, standards from ash residue disposal and air emissions would certainly be far less controversial.

We suggest that the bill consider providing EPA with a simple information collection order authority to require manufacturers and users of products containing problem constituents, particularly metals, to provide volume, exposure, and substitutability information. We also suggest that S.2773 consider clarifying the available TSCA types of control requirements such as product or constituent bans, deposit or take-back systems, marketable permit programs and labeling. TSCA has the potential to provide powerful solutions to some of these problems but its twelve year history has not fulfilled its potential for existing chemical regulation. Section 9 of TSCA needs to be modified as do the section 6 procedural hoops. Moreover, a new discussion of Congressional expectations regarding the use of TSCA would provide important guidance for EPA.

Conclusion

The introduction of S.2773 will undoubtedly commence a wide-ranging debate on a critical environmental issue facing this country. We at BFI look forward to being involved in the debates that will ultimately produce major legislation. We commend Senator Baucus for his efforts to move forward aggressively. It is clear that society will reap the benefits of this type of thorough and thoughtful approach to waste management.

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WRITTEN STATEMENT

STATEMENT ON BEHALF OF THE
AMERICAN PETROLEUM INSTITUTE

THE WASTE MINIMIZATION AND
CONTROL ACT OF 1988 (S.2773)

SUBMITTED TO THE SUBCOMMITTEE ON
HAZARDOUS WASTE AND TOXIC SUBSTANCES
OF THE ENVIRONMENT AND PUBLIC WORKS COMMITTEE

UNITED STATES SENATE

SEPTEMBER 26, 1988

An equal opportunity employer

INTRODUCTION

The American Petroleum Institute (API) appreciates the opportunity to present the petroleum industry's views on Senate Bill S.2773, the Waste Minimization and Control Act of 1988. API represents over 200 companies engaged in the exploration, production, refining, transportation and marketing of crude oil and petroleum products. Many of our wastes are already subject to RCRA waste management controls.

API is fully committed to the primary objectives of the Resource Conservation and Recovery Act (RCRA) "to promote the protection of health and the environment and to conserve valuable material and energy resources." As Congress evaluates additional provisions to accomplish these objectives, API offers three underlying principles to consider in developing a sound waste prevention and management policy:

1. There should be a clear nexus between waste management requirements and demonstrable improvements in health and the environment. Requirements should be performance-based, taking into account the best available science.

2. Waste management requirements should recognize the unique situations presented by specific wastes generated by specific activities. Legislative and regulatory strategies should be tailored to the nature and types of wastes generated from different types of activities.

3. Waste management requirements should be flexible and promote efficiency so that the greatest benefits are realized for a given investment in controls. Legislation should not be duplicative or inconsistent with existing state and federal regulatory programs. It should take into account current management practices and promote economic efficiency. Stringency for stringency's sake should be avoided. Enforcement mechanisms should be an integral element of reasonable requirements.

4. Waste management goals should be pursued in a manner consistent with economic goals.

API appreciates the opportunity to share some of our favorable impressions on this bill, such as promotion of an integrated waste management policy, state responsibility in the development and implementation of solid waste programs, and the use of waste categories to tailor such programs.

We also note, however, some areas needing additional consideration, assessment, or clarification. These areas include some of the overly prescriptive requirements associated with various oil and gas exploration and production wastes and other types of activities, including strict mandatory technology requirements for surface impoundments; the need for greater consideration of existing state and federal regulatory programs; and the need for more flexible approaches in our nation's efforts to minimize wastes.

API comments are based on our actual experiences within the petroleum industry to comply with RCRA and other environmental legislative and regulatory requirements. We commend the Subcommittee for providing the opportunity to share our views on this bill. We look forward to working with the Congress in the development of a reasonable RCRA bill.

API SUPPORTS THE FOLLOWING CONCEPTS IN THE BILL

WASTE MANAGEMENT HIERARCHY. Legislation and regulation should be as much attuned to the practicalities and steps needed to achieve the goal, as stated within the primary objectives of RCRA, as with the goal itself. These "steps" -- embodied in the establishment of a preferential hierarchy of source reduction, recycling, materials and energy recovery, treatment, and contained disposal -- are commendable. API believes that this goal can be greatly achieved by considering the following.

First, legislation should recognize all the steps of the waste management hierarchy that reduce the volume or toxicity of wastes. Thus, the bill should encourage the continued development of treatment technology in addition to source reduction and recycling. Treatment technologies geared toward recovery of resources should be particularly supported.

Second, cooperation and support from both industry and government are necessary to define what is achievable and to successfully achieve reductions in waste generation. API is currently working to improve the industry's ability to minimize waste where applicable through the institution of a number of programs and practices. These include a survey of the types and volumes of waste generated and a manual of waste minimization practices. The bill apparently recognizes that there is limited potential for waste minimization and source reduction for some industries, such as with oil and gas exploration and production. Volumes of wastes generated by this extractive segment of the petroleum industry vary greatly based on age of producing properties, types of production processes and depth of drilling prospects. These wastes typically increase with the age and stage of depletion of a producing property.

API recognizes that government has a vital role to play in encouraging waste minimization. We agree that government should not mandate prescriptive regulations for waste minimization, but should facilitate waste minimization by encouraging the transfer of technology, tracking the progress in waste minimization, and the elimination of regulatory barriers. API also supports the development of many of the programs that the bill would establish, such as programs for administering state grants, establishing an information clearing house, studying regulatory impediments, and better organizing data collection at EPA.

Third, the various elements on the waste management hierarchy should be based on waste-specific and site-specific conditions, taking into account economic practicalities. API is pleased to see this concept incorporated in Section 102 of the proposed legislation in the requirement to consider the market demands for recycled materials.

STATE VS. EPA ROLES. In general, API agrees that the basic structure of the Subtitle D program for nonhazardous solid wastes should be retained as a state-oriented program. This program is most efficient and effective if there is state primacy over implementation within a broad federal framework. Flexible federal criteria enable states to develop appropriate programs targeted to their own environmental needs yet remain consistent with national waste management objectives. EPA should be responsible for providing performance standards, technical and funding assistance in state planning and controls, and state program oversight. The states should be responsible for assessing solid waste problems, prioritizing needs, developing waste management plans, developing and implementing specific regulatory controls, providing for adequate waste management capacity needs, and monitoring compliance and enforcement.

The extremely broad universe of solid waste activities, industries and institutions, and environmental conditions preclude the use of one single approach dictated at the federal level. The specific mix of industries, natural resources, geography, climatological and geologic factors -- as well as socioeconomic conditions within each state -- must be taken into account in selecting the most appropriate approach in a state's solid waste management program. The existence and adequacy of state programs for each particular waste category of solid waste should be considered in developing federal criteria to avoid unnecessary or inefficient disruption of existing programs.

WASTE CATEGORIES. API believes that it is essential for the Subtitle D program to use categories to differentiate wastes produced by different activities. The wide variety of solid wastes which would fall under this program are produced by many different activities including: extractive exploration and production activities, heavy industry, the service sector, agriculture, construction, households, governments, hospitals, and transportation. These wastes have a wide diversity of properties and the potential hazards they pose vary based on such factors as the volume and nature of the waste; the number, size, and complexity of sites at which the wastes are generated and disposed; location to population centers and exposure; typical management practices and regulatory schemes; and their potential for reasonable source reduction and recycling.

An example highlighting the above points are the extractive industries which have their own unique characteristics. The wastes are generally extremely large in volume increasing with age and stage of depletion of a producing property, and generally have low toxicity. They are managed at millions of sites and generated in specific geological provinces often at remote locations and away from population centers.

In contrast, municipal wastes are highly variable and range from inert materials, such as metal or glass, to hazardous materials such as pesticides or halogenated solvents. The wastes are also generated and managed in highly populated areas.

Because of these differences, the various types of wastes pose different hazards; and, more importantly, there are different strategies available to regulate the various wastes. Therefore, federal criteria need to be specific as to the waste category and be flexible enough to allow states the administrative flexibility to focus their solid waste management programs on the specific situations presented within their states.

The use of waste categories sets forth a usable construct -- a way to organize this massive social function called solid waste management. It lends itself to national goal-setting for the particular waste generation activities of concern yet allows the means to achieve these goals determined at the regulatory level tailored to the hazards posed.

API agrees with the concept that requirements developed for each waste category should provide for the "protection of human health and the environment". Requirements should be performance-based taking into account sound scientific principles, existing state and federal regulatory programs, current management practices, and the cost-effectiveness and technical feasibility of alternate control measures. Requirements should be based on what is actually needed to protect health and the environment. Technology for technology's sake does not necessarily lead to more cost-effective or environmentally beneficial methods to protect human health and the environment.

The overall categories identified within legislative language should also remain generic to the types of wastes generated from various activities and not to the waste management scenario. API suggests keeping the industrial nonhazardous waste category generic without specifically referring to surface impoundments. We also suggest that underground injection of nonhazardous wastes be eliminated as a waste category under Subtitle D of RCRA since this activity is already regulated under the Safe Drinking Water Act. If additional requirements are set at the regulatory level, such requirements should then distinguish between management scenarios (e.g., impoundments, underground injection, and landfills) and the hazards posed.

API RECOMMENDS CAUTION IN THE FOLLOWING AREAS

OIL AND GAS WASTES. As a preliminary observation, API suggests that application of the proposed requirements outlined within the bill are at least premature, or perhaps unnecessary, as they apply to drilling fluids, produced water, and other wastes associated with the exploration and production of oil and gas. Those wastes have recently been subject to an extensive RCRA-mandated study by EPA entitled "Management of Wastes from the Exploration, Development, and Production of Crude Oil, Natural Gas, and Geothermal Energy" (December 1987). Based on that study, EPA on June 29, 1988, made a regulatory determination that such wastes do not require RCRA Subtitle C hazardous waste regulation. The regulatory determination reached the following conclusions which are relevant:

- Oil and gas wastes do not pose significant risk to human health and the environment when properly managed.
- Existing state and federal regulatory programs are generally adequate for controlling oil and gas wastes and existing federal and state programs under the Clean Water Act (CWA), the Safe Drinking Water Act (SDWA) and Subtitle D of RCRA are being, or can be, effectively used to address regulatory gaps.
- Subtitle C - type regulation lacks the kind of flexibility required for exploration and production activities.
- Subtitle C - type permitting would unnecessarily hinder the development of new facilities and disrupt the search for new oil and gas deposits and place unnecessary permitting burdens on regulatory agencies.

Based on these conclusions, EPA will further evaluate the management of oil and gas wastes by:

(1) improving federal programs using existing authorities under the CWA, the SDWA and Subtitle D of RCRA.

(2) working with the states to improve their regulatory programs, and

(3) considering whether additional authority may be required.

EPA has already significantly embarked on the first two steps. Consequently, the requirements listed in this bill for oil and gas wastes seem premature until EPA has had an opportunity to consider if additional authority may be required. EPA may conclude that it has sufficient authority under existing Subtitle D to develop a "tailored" program which is effective and environmentally sound. Even if EPA concludes that additional Subtitle D authority is required, the knowledge and insights gained from its current activities will help Congress develop the appropriate legislative approach.

API is currently working with EPA, Congress, and the states to improve the effectiveness of existing regulatory controls. As part of this program, API is developing an environmental guidance document on production waste management practices and is planning a symposium with EPA addressing production waste management practices and recycling opportunities.

API also notes that the proposed standards for plugging and abandonment of oil and gas wells are already part of existing regulations and do not pose the necessity for regulation under RCRA. EPA regulates well bore abandonment for wells that could potentially impact usable sources of drinking water under the Safe Drinking Water Act. Further, all states presently have regulations that require operators to obtain approval of their plugging procedures. These proposed standards in this bill address operational activities, such as drilling and workover operations, rather than RCRA solid waste management practices.

UNDERGROUND INJECTION OF NONHAZARDOUS WASTES (UIC). API believes that underground injection of nonhazardous solid wastes are more appropriately regulated under existing Safe Drinking Water Act legislation and regulation, which has the prime objective of protecting drinking water sources. A large body of state and federal regulations already exist for these activities. The bill should be clarified to state that these activities would not be preempted or dually regulated under RCRA.

SURFACE IMPOUNDMENTS. API believes that waste categories should be based on waste generation activities -- not on waste management practices. Therefore, surface impoundments in the nonhazardous industrial wastes category needs to be deleted from the proposed legislative language. If the regulatory agencies (e.g., EPA and state agencies) determine that additional requirements are needed for surface impoundments containing nonhazardous solid wastes, such requirements should then be tailored to the category of waste contained within the impoundments and specified within state permits.

API strongly opposes the Subtitle C-like controls mandating double-liners within four years of enactment of this proposed bill for all surface impoundments. By no means should there be the presumption that all surface impoundments need double-liners and pose the same hazards. Rather, any additional requirements should be performance-based, founded on the "protection of human health and the environment" standard and developed at the regulatory level. Specific controls must take into consideration the types of materials contained in the impoundment, site-specific factors (e.g., geohydrology and climatology), management practices and existing regulatory schemes (e.g., NPDES permit requirements under the Clean Water Act and state oil and gas regulations) and the cost-effectiveness of alternate control measures.

A recent API study concluded that the potential cost impact to the petroleum refining industry alone of such a requirement would be $8 billion -- and this is based only on "primary" wastewater treatment impoundments. If stormwater retention impoundments are included, the costs increase to approximately $20 billion. These costs do not even include the cost of operating and maintaining the new units. In addition, the process of retrofitting impoundments -- or, more likely, replacing the impoundments with aboveground tanks -- would severely curtail a refinery's operations. A refinery cannot operate without its wastewater treatment system and four years may not be sufficient time for making such major and complex modifications. Given the potential for major disruptions to industry in general, and the petroleum refining industry specifically, we urge caution and flexibility in a federal approach based on a serious consideration of scientific, technological and economic facts. The potential costs incurred must be commensurate with the benefits expected to be gained.

FAILURE TO SUBMIT A STATE PLAN. API has strong reservations about the provision proposed in Section 202(e) that would provide sanctions for a state's failure to submit a solid waste management plan. This provision would prohibit all federal agencies from issuing "any grant or loan or loan guarantee or ... any license or permit for any activity [in an uncooperative state] unless a Federal agency can demonstrate that such activity shall not cause or contribute to the generation of solid waste."

There are very few activities that are not affected by federal funding or permitting authority. There are virtually no activities that do not generate some quantity of solid waste. Thus, the potential effect of this provision would be to virtually shut down a state. Innocent corporate and individual citizens would be unfairly penalized for the failure of a state government to submit a plan. API questions whether this is the intent of this provision and whether alternate federal actions are more appropriate.

SCHEDULES. Proposed Section 203, "Permits for the Disposal of Solid Wastes," requires permits to be issued within one year after the bill is enacted; otherwise, the solid waste management activity is presumably automatically prohibited. A one-year deadline does not allow the states enough time to modify their Subtitle D program, give ample notice to solid waste management facility owner/operators, obtain and evaluate necessary facility information, and act on permit applications. This one-year requirement is even more impractical given the number of sites needing to be permitted and the resources (personnel and funds) that will be required.

Proposed Section 204, "Solid Waste Management Guidelines" sets forth a schedule under which the Administrator is to develop and promulgate prescriptive minimum design and operating standards for the categories of solid wastes. Although the intention may be to prioritize agency action, we observe from similar schedules set under the 1984 amendments, that the dates tend more to trigger litigation than to lead to timely development of effective regulatory programs. We note a recent report prepared by the U.S. General Accounting Office (GAO), which indicated that statutory deadlines may actually impede the implementation of other important environmental protection efforts.

A more practical approach may be to rank-order the waste categories for regulatory action allowing greater agency flexibility in determining the scope and appropriateness of standards to be developed.

PERMITS AND GUIDELINES. The permitting conditions listed in Section 203(e) of the bill should be applied only as appropriate to the particular waste category and site conditions. Similarly, Section 204(b) guidelines should allow EPA, after careful deliberation of each of the measures listed for a particular waste category, to conclude that one or more of the design and/or operating measures may not be necessary or could be more appropriately addressed by the state regulatory agencies. Flexible federal criteria implemented and enforced at the state level would facilitate the process for siting new waste management facilities in order to meet growing capacity needs.

Activities that have large numbers of small sites and that are of a temporary nature should be allowed to be "permitted" using alternative mechanisms rather than the RCRA Part B - type permits proposed under Section 203. For example, the exploration and production segment of the petroleum industry would have 1.25 million "facilities" requiring permits if each well is considered a "facility." The number of permits would overwhelm the regulatory agencies and greatly hinder the development of new oil and gas facilities. Any permitting requirements should provide the permitting authority discretion with respect to the need for, and type of, permits. The bill should authorize, under appropriate circumstances, permitting authorities to:

- o exempt temporary or small quantity generator facilities, and
- o use permits by rule, area-wide permits or general permits

The bill also needs to more clearly define the types of facilities intended to be covered by the permitting program.

NO RELEASES/CORRECTIVE ACTION. Until EPA develops regulations for each solid waste category, existing solid waste facilities would be required to submit information demonstrating either that the facility is not releasing hazardous substances into the environment or that releases are being controlled through corrective action. Strictly interpreted, the concept of demonstrating or verifying "no releases" represents a physically impossible situation. Hundreds of thousands of solid waste facilities (note that there are 1.25 million exploration and production "facilities") cannot be expected to grapple with a practical demonstration of "no releases;" to collect substantiating data, and to submit enough data even to approach a demonstration within a reasonable time frame. Even if a significant number of facilities attempted to make such a demonstration, interpretation of these demonstrations by EPA would be very overwhelming at a time when EPA should be devoting efforts to development of a long-term regulatory program.

Recognizing that it will be virtually impossible for facilities to prove that no releases are occurring, the existing legislative proposal would cause all solid waste facilities in the nation to implement a corrective action program under RCRA Section 3004. Evidently, even releases which are allowed under permits from other regulatory programs could trigger a corrective action program. We believe that corrective action should only be required if releases are significant enough to pose a demonstrated threat to human health and the environment. Corrective action programs should be carefully developed for each waste category to ensure that resources are properly dedicated; a "tailored" corrective action program would allow the most environmental benefit from limited amount of resources (e.g., human, technological and financial).

SUBTITLE C HAMMER. If EPA determines that state regulations for a particular waste category under the Subtitle D program are not protective of human health and the environment, the Agency should only require additional controls if necessary to meet the "protection of human health and the environment" standard for the particular waste category rather than across-the-board Subtitle C controls proposed in Section 204(a)(ii). Also, API believes that EPA must be required to first publish its finding and determination of inadequacy along with proposed controls for public comments before levying additional controls.

WASTE MINIMIZATION. API supports the concept of waste minimization and believes that all waste producers should be encouraged to develop or adopt practices that reduce the volume and toxicity of wastes, to the extent practical. Indeed, the petroleum industry has a history of extensive recovery and recycling of oily materials for reprocessing.

Waste minimization programs were created in many petroleum facilities prior to the regulatory requirements which now dictate their existence. The impetus for these programs was a commitment to environmental quality in addition to economic considerations. Most waste minimization programs are under the direction of a corporate level committee, which develops and directs the waste policies, establishes the financial priorities, and assures that waste minimization considerations are incorporated into future process designs. These programs have been very successful in reducing the amounts of wastes generated and serve as the basis for further waste minimization developments.

We believe that sufficient incentives already exist to stimulate industry to develop waste minimization programs and technology. Without the availability of an adequate data base upon which to base prescriptive waste minimization goals, API believes that it is premature to set one efficiency standard for several manufacturing and industrial classes. Furthermore, while the waste minimization reporting requirements as written in the bill are unclear, some of the data requirements appear to be redundant with those of other environmental statutes. In addition, API questions the feasibility and practicality of continuous monitoring requirements.

Improvements in laws should be based on a good understanding of what is feasible and reasonably achievable. Increased stringency for stringency's sake is not beneficial to any affected party. Waste minimization policies should be flexible so that they may allow for maximum cooperation between EPA and industry as the state-of-the-art is further refined. Therefore, we suggest that Congress proceed with caution in the consideration of various measures where data are lacking and that further investigations are warranted before prescriptive legislative mandates are enacted.

Definitions. Concise definitions and consistent terminology are needed throughout the bill in order to avoid ambiguities in the application of future regulations. For example, Section 305 of the bill, "Waste Minimization Performance Standard," amends the Solid Waste Disposal Act but sets an efficiency standard and other requirements for "hazardous substances" for any person required to file a SARA Section 313 "toxic chemical" release form. The proposed legislation does not define "hazardous residual," "hazardous substance," "toxic chemicals." The term "hazardous substance" includes a very broad range of materials as defined in Section 101(14) of CERCLA. The term "hazardous chemical" defines an even broader range of materials under OSHA's

Hazard Communication Standard and SARA Section 311. The term "toxic chemical" is identified by a relatively short list of materials under SARA Section 313.

Efficiency standard. The potential ability to comply with a 5-percent release standard on production throughput or any other proposed standard depends, to a large degree, upon the resolution of definitional issues. Section 305(a)(2) requires that EPA promulgate regulations specifying the manner in which production throughput is to be calculated. API suggests that alternatives be identifed and evaluated for their administrative, economic, and technical practicalities prior to determining a waste minimization approach -- let alone specified measures within an approach.

API also suggests that EPA conduct a thorough study of a number of industries to determine the types of goals, if any, that can be set for a variety of manufacturing and industrial classes. It is unclear, however, whether Congress intended permitted discharges to be included in the computation of the releases.

Wastes generated by the refining segment of the petroleum industry offer an excellent example of the difficulty of implementing an efficiency standard, even at one facility. The nature of the petroleum industry and the fixed nature of the industry's raw materials greatly influence the extent to which waste minimization can be practiced. Crude oils can vary widely in composition, and each represents a very complex substance composed of thousands of individual chemical constituents, including sulfur, nitrogen, and metals. In addition, crude oil contains varying amounts of water, salt, and sediments. Because of the complexity of the substances and processes involved and limitations of existing chemical analysis techniques, refiners generally have not attempted to identify and track individual chemical constituents through the refining process. Instead, they have used as control criteria more easily measured overall qualities of the major refinery process streams such as gravity; boiling point; total sulfur; total paraffins, olefins and aromatics; or octane and cetane number. To attempt to develop even an estimate of the concentration of each hazardous substance chemical -- as a trace constituent or otherwise -- in all streams entering, produced in, consumed in, and leaving the refinery as a product, emission, or waste would yield usable data. These concentrations usually are unknown or highly variable.

Reporting requirements. The scope and frequency of reporting requirements are unclear. Section 305(a)(1) refers to an efficiency standard applicable to "any person required to file a toxic chemical release form under Section 313 of SARA." It is unclear whether the efficiency standard covers only those chemicals for which a report is necessary or any chemical contained on the Section 313 list that is released by the facility, regardless of the amount. This is further complicated since the amount of a chemical release allowed before a Section 313 reporting requirement is triggered decreases over a period of time.

Section 305(a)(4) proposes that each facility covered submit "a plan to quantify and report on ... the manner in which each hazardous substance ... is consumed, used and/or released." It is unclear how such a plan to quantify and report is supposed to relate to SARA Section 310, 311, and 313 reports, potential reports under TSCA 8(a), and TSCA 8(b) periodic reports. The complexity and feasibility of such a report would depend on the extent of coverage of the "hazardous substance" and "waste" definitions.

Continuous monitoring. Several provisions in Section 305 require manufacturers to install "continuous emission and environmental monitoring equipment capable of detecting losses to the environment through spills, leaks, discharges, dumps, releases, or emissions of substances" listed under SARA section 313; or capable of detecting and reporting all emissions or discharges in excess of ... permits, ... or 313 substances ... in excess of threshold limit values." API suggests that periodic sampling of waste streams can be equally effective as continuous monitoring in meeting the intended performance standard and much less expensive for industry to implement. In addition, continuous monitoring systems do not exist for all SARA 313 chemicals. Furthermore, threshold limit values have not been established for all SARA 313 chemicals.

Within the petroleum refining sector, which is required to report under SARA Section 313, the majority of hydrocarbon losses are estimated to occur as "fugitive" emissions to the atmosphere from minuscule leaks from thousands of individual items of process equipment at flange points (required for maintenance) or at shaft seals of valves, pumps, or compressors. These fugitive leaks are similar to ones that can occur in a car or home air conditioning system. API is not aware of any practical method of using "continuous monitoring equipment" to detect -- much less measure -- the amount of these losses.

API and others in the industry have carried out monitoring surveys to measure the average 24-48-hour concentration of many SARA Section 313 chemicals in the ambient air near refinery fencelines. Most were found at levels of 1-5 parts per billion, which is near the limit of detection for the most sophisticated monitoring techniques. In many cases the "downwind" concentrations were only slightly elevated over the "upwind," and generally, no different than the concentrations found in most urban locations. This suggests that there are many other important sources of these emissions. It would be impossible to use ambient air concentration measurements to measure with any usable accuracy the amount of emissions or to relate to threshold limit values or permit violations.

WASTE EXPORTS. API supports the concept that the United States should not attempt to solve solid waste problems by exporting their wastes to other countries. However, a broad prohibition of exports of solid wastes may unintentionally restrict legitimate export operations. Specifically, Section 206, "Waste Exports," needs clarification to define the requirements for exports that can potentially become a waste when materials are processed in another country. For example:

- o Iron ore shipped from the U.S. to another country for the production of steel would contain impurities (soil, rocks, etc.) that are removed during the steelmaking process. Are these impurities considered a waste at the time they are shipped as part of the ore?
- o Refining catalysts are routinely exported for the explicit purpose of regenerating and recycling that catalyst. During that recycling process, materials that have accumulated on the catalyst are removed. Is it necessary that the U.S. and the receiving country enter into a "solid waste" agreement before this practice can continue?
- o Packaging materials used to contain a product during storage and transport (paper boxes, wood crates, metal cans, dunnage, etc.) can ultimately become solid waste in the receiving country. Since the U.S. supplier does not expect to have these containers returned they are, in effect, shipping them to the receiving country for disposal. Does this mean that all shipments of packaged products to other countries must cease until the U.S. and that country have entered into a "solid waste" agreement?
- o Are ballast waters associated with the shipment of crude oil potentially subject to this provision?

API suggests clarification on the types of solid waste potentially affected by the proposed waste export requirements.

PACKAGING. API acknowledges the need to establish incentives for consumers who have a preference for goods packaged in a manner that meets the purposes of Section 307(b). However, charging a fee to use a National Packaging Institute-approved package may serve as a disincentive since this cost would likely be passed onto the consumer. This could place the seller at a competitive disadvantage. In addition, the seller may be placed at a competitive disadvantage when trying to compete for consumer appeal if unable to use a larger size or more attractive package material.

ENVIRONMENTAL DEFENSE FUND

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TESTIMONY OF

THE ENVIRONMENTAL DEFENSE FUND

AT A HEARING BEFORE

THE SUBCOMMITTEE ON HAZARDOUS WASTES AND TOXIC SUBSTANCES

OF THE SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

ON

S. 2773: THE WASTE MINIMIZATION AND CONTROL ACT OF 1988

September 26, 1988

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I. INTRODUCTION

On behalf of the Environmental Defense Fund (EDF), I appreciate the opportunity to testify today on Senate Bill 2773, the Waste Minimization and Control Act of 1988. EDF is a national environmental and public health advocacy and education organization with more than 65,000 members in all 50 states. Through the work of our toxic chemicals and solid waste programs, we seek to promote environmentally and economically sound waste management alternatives such as reduction, recycling, and reuse. We further seek to ensure that all waste management activities are carried out in a manner that fully protects human health and the environment. Our recent activities in the areas of solid and hazardous waste management include economic analyses of the advantages of and potential for large-scale solid waste recycling; research into the risks of solid waste incineration as a basis for legislative and regulatory initiatives to better manage these risks; continuing efforts to ensure the proper management and definition of hazardous wastes under Subtitle C of the Resource Conservation and Recovery Act (RCRA); and research aimed toward implementation of sound approaches to hazardous waste source reduction.

EDF supports the intent, and much of the content, of S. 2773 as a much needed step toward expanding the scope of RCRA beyond its traditional thrust of ensuring proper waste _disposal_. This legislation begins to substantively address what many argue was the original intent of RCRA: to promote the _conservation and recovery_ of materials that comprise hazardous and solid waste, as the means of achieving the closely related goals of reducing both the amount and toxicity of waste and ensuring environmental protection.

The legislation we are considering today identifies two critical, but largely unaddressed, roots of our solid waste management crisis. First, it recognizes that the problems we face in waste disposal begin long before the actual discard or discharge of waste materials. Decisions made at the earliest stages of product formulation, packaging, and marketing can profoundly affect the environmental and economic viability of the options available to manage those same products once they become waste. Yet no mechanism currently exists for even influencing such decisions in order to reduce the toxicity and amount of such products and their packaging, or to increase their recyclability or safety of disposal. EDF applauds your efforts to address this fundamental source of our solid waste management crisis.

Second, the legislation recognizes that successful conservation and recovery of materials -- as well as sound waste management -- depends on maximizing the segregation of different components of our solid waste stream. The value of recovered materials and the ease, economy, and safety of waste management can be increased dramatically through implementation of source separation programs, intermediate waste processing facilities, and other similar approaches. Indeed, our nation's solid waste management system could greatly benefit by taking to heart the adage that pollution and waste are simply resources out of place.

Finally, S. 2773 recognizes the critical need for planning and the commitment of financial and technical resources at all levels of government. In the area of solid waste, implementation of the waste management hierarchy through activities such as market stimulation for secondary materials and development of waste management capacity will require concerted and sustained efforts that no single unit of government can accomplish alone. Consistent with the findings and national policy objectives of S. 2773, EDF believes that a strong federal leadership and funding role -- virtually non-existent in the solid waste arena for the last decade -- is more than warranted.

The remainder of this testimony offers EDF's perspective and some suggestions for improvement of the legislation, and is organized according to the waste management hierarchy contained in the statement of national policy (Section 102(e)).

II. SOURCE REDUCTION AND WASTE RECYCLING

Section 101(b): National Policy

EDF considers the statement of national policy somewhat ambiguous in that it limits recycling to that "consistent with market demand." In actuality, a (if not the) primary factor limiting current demand is the current supply of secondary materials. National policy should be driven by future supply and demand -- elements that this legislation will be critical in developing. We would therefore urge the following restatement of national policy:

> "Congress further establishes as a national goal the recycling of waste to the maximum extent achievable. Where market demand is inadequate to absorb elevated levels of supply, Congress establishes as a national goal the creation and strengthening of markets for recycled materials."

Section 301

EDF supports the stated goals for solid waste recycling contained in this section, so long as they are not viewed in any respect as upper limits. From a technical perspective, significantly higher levels of recycling should be achievable over the long term, and should continue to be strived for.

In working toward such goals, states should be required to develop (and include in their state plans) policies and institutionalized mechanisms to ensure that recycling is able to compete under the same groundrules as incineration and landfilling. For example, state plans should be required to include a comparative economic analysis of recycling, incineration, and landfilling that incorporates often hidden subsidies and "external" environmental costs such as groundwater cleanup and landfill closure. As another example, state guidelines addressing local capacity planning should mandate that procedures for contracting for waste management services provide equal access for all of the available options. Only through such means can the goal of achieving at least 50% recycling "where recycling constitutes least cost disposal" be fairly and accurately assessed and implemented.

Finally, the percentage figures should be specifically defined as applying to the percentage of waste disposed of, rather than the percentage of waste generated. The former is far easier to measure and will more readily provide for establishment of a baseline from which to gauge progress.

Sections 302-304

EDF strongly supports the establishment of an EPA Office of Waste Minimization, a state grants program, and a clearinghouse for waste reduction and recycling (Sections 302-4). In addition to elevating the level of importance of -- and Federal activity in -- waste reduction and recycling, these provisions of S. 2773 would provide much-needed financial and technical assistance, as well technology and information transfer, the absence of which goes far toward explaining the virtual standstill we have witnessed in increasing the use of these preferred tiers in the waste management hierarchy.

In evaluating applications from states for grants under Section 304, several criteria in addition to those listed should be considered. First, the grants program should serve an incentive/reward function. For example, grants could be preferentially made to states that have made substantial progress toward attaining or even exceeding the recycling goals stated in Section 305, effectively rewarding the progress they have made without federal dollars. As a nation, we need to develop and promote programs that seek to maximize recycling as a waste management alternative in order to explore and define its full potential. Such an approach already has precedent: New Jersey allocates funds derived from a landfill surcharge to counties based on their recycling rates. In addition, grants could be awarded preferentially to states seeking to implement state-of-the-art waste processing methods such as large-scale anaerobic digestion or materials separation technologies, as a means of encouraging innovation and diversification of waste management options.

Section 305

While EDF supports the intent behind the creation of a national performance efficiency standard for industrial waste generators (Section 305), we have several concerns about its definition, implementability, and most seriously, its ability to reduce waste generation. With respect to definition, numerous difficult questions are raised. For example, it is unspecified yet critical to applying the standard whether the 5% figure would apply to facilities or to processes within a facility (and if the latter, how these would themselves be defined). A standard based on quantity of waste does not account for the actual toxicity of the waste and could provide a means -- and even an incentive -- for generators to circumvent the intent of the standard through mere volume reduction. These and other concerns would likely create innumerable unforeseen loopholes or wreak havoc on regulatory resources where generators opted for the case-by-case variance provision. Moreover, the apparent allowance for facilities to escape the standard merely by installing continuous monitoring (in and of itself, a good provision) is perplexing.

Finally, EDF has concerns about the level at which the standard is set and the schedule for compliance with it. We are not aware of a convincing analysis of existing waste generation to support the use of a 5% standard. Some have argued that many or most large waste generators may already be meeting the 5% standard; if true, such a standard might reduce or eliminate these generators' plans or incentives to achieve higher levels of waste reduction. Similarly, the proposed 10-year compliance schedule with no intermediate benchmarks may serve to postpone serious steps toward waste reduction, again working against the intent of the provision.

In summary, we would encourage at this time a legislative mandate for the development of workable definitions and facility and process studies aimed at supporting the implementation of an efficiency standard approach, but have serious concerns about our present ability to impose such a standard.

Section 307

EDF supports the formation of a national packaging institute, given the fact that packaging materials comprise more than a third (and counting) of the municipal solid wastestream. The development of national standards governing packaging is critical to achieving reduction of this significant wastestream component, given the limited ability and the disincentives facing states and localities in implementing such measures and the interstate commerce of packaged products.

The statement of purpose of the institute should account not only for the "cost and convenience of consumer products," but also the cost and safety of the subsequent management of such materials when they become waste. Finally, packaging standards should explicitly address the toxicity of the constituents of packaging materials -- both in their initial forms and in the forms they may eventually take as a result of waste processing or disposal.

Section 308

EDF supports the innovative concept of waste reduction petitions contained in this section. However, the condition that a petition not be granted unless it entails no increase in spending by the Federal government is unwarranted and would likely effectively undercut the entire section. While costs of reduction measures should be among the factors to be evaluated, we see no rationale for precluding measures that would involve Federal spending if substantial benefits would accrue. Indeed, the beneficiary of most waste reduction measures would be some party other than the Federal government (e.g., the public). The cost of implementing a given measure should be evaluated in light of its public benefits with respect to reducing waste disposal costs and enhancing environmental and public health. Such considerations should also account for the difficulty in quantifying some potential benefits in strict dollar terms.

Sections 309 and 311

EDF has been a strong advocate of Federal procurement as a means of stimulating markets for recycled materials, as evidenced by our successful lawsuit against EPA compelling the Agency to issue its long-overdue procurement guidelines. Federal procurement policies exert a strong positive effect on market development, both directly and symbolically in providing a model for other parties to follow. We support the extension of the procurement concept to federal contractors that is contained in section 309, and would urge its further extension to state governments under the state planning provisions of this legislation.

Section 311 lays out a schedule for promulgation of additional procurement guidelines by the Federal government. The rationale for the order in which standards are to be issued is far from clear, however, and in our view, the schedule stretches over an unduly long period of time.

Finally, the sources of recycled materials in the various categories for which procurement guidelines are to be developed are unnecessarily specific. There is no reason or need to limit sources of recycled plastic, glass, or steel to containers, nor to exclude food waste or other organic materials from compost. Similarly, road cover could incorporate glass (a material known as glasphalt).

Section 310

It is critical to rational solid waste management that we know the composition of the material we are trying to manage. This obvious statement is nevertheless far from being achieved at present. Little information is available to decisionmakers concerning even the most basic questions. For example, quantitative information on the sources of the toxic metals that are found at elevated levels in municipal incinerator ash remains obscure, almost completely precluding our ability to reduce the toxicity of this waste through targetted removal of materials from the incinerated wastestream. EDF strongly supports the intent and content of this section of the legislation.

It is important to recognize that certain hazardous components of wastes are of environmental and health concern no matter what management method -- landfilling, incineration, recycling, composting -- is employed. For example, recycling of waste materials containing toxic metals (e.g., paper or plastic colored with metal-bearing inks or pigments) may constitute a substantial risk if not properly controlled. The language of this section should be revised to reflect the hazardous constituents in products that may "present a risk to human health and the environment when incinerated, disposed of, or recycled."

Given the above considerations, EDF is concerned that subsection (f) of this section appears to remove or reduce liability under Superfund applicable to certain battery recyclers. While we appreciate the motivation for such a provision, we must seriously question its inclusion in this legislation from the perspectives of environmental and human health and bad precedent. We believe that some alternative means of encouraging battery recycling must be employed, and would be pleased to assist the subcommittee in this endeavor.

Section 402

EDF generally supports the concept of a packaging tax for at least three reasons: 1) it compensates for the host of federal programs that subsidize the exploitation of virgin materials; 2) it can aid in making products with recycled content more competitive, thereby bolstering markets, by at least partially internalizing the cost of disposal of excess packaging; and 3) it provides a source of revenue.

It is important, however, that such an approach be based on a sound analysis so that the amount and means of imposing the tax accomplishes the intended purpose(s). For example, if the tax is advocated as a measure to cause manufacturers to shift to using packaging materials with a higher recycled content, the amount of the tax should be geared to influencing such investment decisions on the part of manufacturers. If internalizing the external costs of disposal is the desired end, it must be shown that the amount of the tax is at least roughly proportional to the environmental or economic costs of disposing of the packaging. The multiple purposes of such a tax may be simultaneously achieved under certain schemes; under others, they may be in conflict.

The concept of a packaging tax could be applied in additional ways that would directly affect waste reduction with respect to both waste quantity and toxicity. For example, consideration should be given to imposing a sales tax on disposable items for which there are readily availble substitutes. Similarly, sales or user taxes based on the presence or amount of a toxic constituent used in a product (e.g., cadmium used as a stabilizer in plastic) for which alternatives exist also warrant consideration.

III. SOLID WASTE MANAGEMENT

Section 203

EDF supports the requirement of this section that all facilities used to store, treat, or dispose of solid waste be required to obtain a permit.

Several aspects of the permit requirement, however, must be strengthened to ensure environmental protection.

First, existing facilities appear to be largely "grandfathered" into the permit system without sufficient assurance that they will comply with the requirements of this section. Subsection (a) requires only that certain information be submitted by existing facilities in order to "be treated as having a permit." There is not even a requirement that such information be deemed by the state or the Administrator to be of sufficient quality and quantity to qualify for permit status.

The only type of information required of existing facilities is data on groundwater monitoring, in contrast to the much more detailed information required before issue permits can be issued for new facilities under subsection (e). The latter includes information on the types, quantities, and composition of wastes accepted, design and locational characteristics, air monitoring data, corrective action, and others. There is simply no rational basis for not requiring such information of existing facilities.

Subsection 4011(i) appears to also require evidence that any releases from existing facilities are being controlled through corrective action; the subsection, however, only refers to corrective action required under RCRA Section 3004 -- a provision that applies only to facilities regulated under the hazardous waste regulations of Subtitle C. Indeed, corrective action applicable to Subtitle D facilitites is entirely undefined in this section.

Subsection (f) requires modification of permits to require compliance with any new standards; since permits are not actually required of existing facilities, however, neither the intent nor the mechanism to require existing facilities to meet new standards is apparent.

Subsection (b) should include the additional prerequisite for certification of state permit programs that such programs have enforcement authority equivalent to that of the Federal government.

Finally, EDF strongly opposes the inclusion of subsection 203(h), which states that compliance with a permit constitutes compliance with all of the requirements of Subtitle D. Among other problems, this unprecedented provision would preclude any recourse on the part of the Administrator in the event of an inadequate permit issued by a state.

Section 204

Requirements for the various categories of facilities should be in the form of regulations, not guidelines as the title of this section suggests. This is the apparent intent as reflected by the various places in the section where the term regulations is used, but should be clarified in the title and throughout the section.

This section would regulate the management of numerous categories of waste whose current regulatory status is in some cases ambiguous, unresolved, or under study. EDF is concerned that this legislation, which would amend Subtitle D of RCRA, not be construed as exempting such wastes from the more rigorous standards promulgated under Subtitle C. Indeed, EPA has conceded that some of these wastes are hazardous and may require such control.

In addition, it is critical that even to the extent such wastes are regulated under Subtitle D, the authority of EPA to regulate such wastes extend beyond its authority to approve or disapprove state plans. At a minimum, such authority must include the ability to regulate the management of these wastes where states fail to do so. In addition, federal authority over these wastes should at least be comparable to the authority granted the Agency by Section 4010(c) of RCRA for landfills that may accept small quantity generator or household hazardous wastes.

This section as currently drafted neglects the large numbers of industrial Subtitle D facilities other than surface impoundments: more than 2500 landfills, more than 4000 land application units, and more than 5000 waste piles, which together manage about 260 million tons of waste annually. Correction of this oversight is in keeping with the intent of S. 2773.

EDF strongly supports subsection 4011(a)(iv), which provides the Administrator with the authority to impose management requirements upon facility-specific delisted hazardous wastes as necessary to protect human health and the environment. Based on EDF's experience in evaluating petitions for hazardous waste exclusions, the authority to require controls in addition to those generally applicable to wastes under Subtitle D is essential to ensure their proper management.

Regulations promulgated for various waste categories under Section 204 should consider, in addition to the factors listed in subsection (b), the potential for and means of reducing the generation or toxicity of such wastes, as well as recycling or reusing such wastes.

Corrective action requirements (subsection (b)(4)(F)) for each of the waste categories should be revised to require an enforceable schedule for corrective action for all releases of hazardous constituents from any solid waste management unit at a facility seeking a permit, regardless of the time at which waste was placed in such unit. This language -- which appears later in this section under subsection (c)(6) -- is certainly appropriate for all wastes regulated under this legislation. Moreover, all solid waste facilities regulated under this section should be required to demonstrate that they are not releasing hazardous substances into the environment or are controlling such releases through corrective action.

Closure requirements must include a requirement to demonstrate that there is no release of hazardous substances into the environment prior to closure. EDF supports the 30-year post-closure term specified in subsection (c)(7) for facilities accepting ash, and sees no rationale for not extending such requirement to the other categories of facilities regulated under this section. The post-closure provision should include cover inspection and maintenance requirements.

MSW Incinerator Ash: Requirements under this section applicable to facilities accepting incinerator ash are in EDF's view inadequate in both scope and content. Many of the provisions this section would apply to MSW landfills are equally relevant to ash disposal sites, yet are not included: for example, daily cover, access and run on/off controls, location standards, and construction quality assurance/quality controls. We have provided extensive comments on the necessary provisions of such regulations in other fora, so we will not repeat them here.

On this same issue, EDF appreciates the intent of the legislation in addressing the need to regulate ash residues. As the subcommittee is aware, various other vehicles for regulating these wastes are being considered. Given the extensive commitment of time and effort on the part of various parties devoted to developing these vehicles, it remains our hope that such legislation can be adopted during this Congress.

We heartily support the intent of subsection 204(h) to close or retrofit all industrial surface impoundments that do not meet the minimum technological requirements of RCRA Section 3004(o) four years after the date of the bill's enactment. Leaking, unlined or minimally lined surface impoundments pose well-established threats to underlying groundwater. Unfortunately, EPA's recognition of this threat is less than complete; indeed, EPA recently proposed to allow substandard hazardous waste surface impoundments to continue accepting solid wastes after the November 8, 1988 retrofit-or-close deadline.

Section 205

In EDF's view, subsection (a)(2) would severely and unjustifiably limit the Administrator's enforcement authority in cases of violations of permits or requirements of the subtitle. While prior notice to the state is appropriate, EDF sees no rationale for requiring that such notice precede any further action by at least 60 days. The 60-day notice requirement to the alleged violator is even more unreasonable, and should be stricken entirely. There may well be emergency situations where immediate action is called for, and tying the hands of the Administrator in this manner would not provide for protection of human health or the environment. Nor do we see the need or justification for limiting the Administrator's authority to act in cases where the state has commenced an action.

Section 206

EDF lends its strong support to the provisions of this section that place controls over the foreign export of wastes. This growing problem demands regulatory attention, and the subcommittee is to be commended for recognizing and addressing it.

NEDA
RCRA

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Before the

Subcommittee on Hazardous Wastes and Toxic Substances
Committee on Environment and Public Works
United States Senate

Testimony of

Catharine M. deLacy, Project Director

THE NATIONAL ENVIRONMENTAL DEVELOPMENT ASSOCIATION'S
Resource, Conservation and Recovery Act (RCRA) Project

on

S. 2773
The Waste Minimization and Control Act of 1988

Mr. Chairman and members of the Subcommittee, good morning. I am Catharine deLacy, Project Director of the National Environmental Development Association's (NEDA) RCRA Project. We appreciate the opportunity to be a part of the discussions on the critical issue of waste management. NEDA is a 15-year old labor-industry-agriculture membership organization, dedicated to fulfilling both the public's demand for a clean and healthful environment and the equally pressing need for industrial development and growth. The NEDA RCRA Project consists of members representing the consumer products, chemical, petroleum, steel and mining industries. These companies have made a commitment to being progressive and proactive in their approach to the management of environmental issues.

My statement represents the NEDA RCRA Project's views on S. 2773, the Waste Minimization and Control Act of 1988. In general, we support and applaud you, Mr. Chairman, for these efforts in addressing a most important issue facing us in the RCRA Reauthorization debate: How America is going to manage its waste. As industry is a leader in waste management, we acknowledge that waste is the problem and our members intend to work with you, using our technology and expertise, toward the solution.

Specifically, we support the thrust of this legislation and the insight of this committee for recognizing that there are options for waste reduction, recycling, treatment and disposal. NEDA RCRA supports an integrated approach to the waste problem, based on appropriate technologies and regional needs. We feel that an integrated approach recognizes that all waste activities are needed and avoids the risk that a hierarchial approach could slow down the siting of necessary and safer new incinerators or landfills. Each community and region is different both in waste problems and more importantly in their economics. The provisions for state and regional planning are important in this context. We support a federal guiding hand, where appropriate, to expedite the waste management process.

NEDA RCRA is also pleased to see a constructive approach to the permitting and solid waste management process which is expressed in the bill. Although some specifics are still of concern, in particular, the extent of permits required, permit timing requirements and the role of guidelines, we are pleased to see a focus on the permitting process which should expedite the siting of new facilities. Clearly, there is, and will continue to be, a need for siting facilities in order to achieve the optimum integrated approach for communities. We are happy to see this concern highlighted in this legislation.

Members of the NEDA RCRA Project, like you, are committed to some vital elements of a waste management program. The goals to this end include education, technology, and economics. We are committed to taking a leadership role in all of these areas and have initiated several programs to demonstrate our level of commitment. Several companies have highly successful corporate waste minimization and reduction programs. If it would be helpful to this committee, we would be happy to share these results with you. We feel it is important for committee members to recognize that these types of programs have been successful due to substantial committtment on the part of the NEDA membership. An additional component of these successful programs is the establishment of a database which has proven to be a key element for any realistic waste reduction program. It is this concept that we feel should be incorporated into S. 2773.

The waste reduction and recycling provisions in the legislation are admirable, however, there is an important component; data-gathering is not prescribed. The NEDA RCRA members feel strongly that such information is necessary before the prescriptive standards, goals and efficiencies described in S. 2773 can be realized. We would be happy to work with members of this committee and others in this area based on our members' experiences and their successful programs.

We would like to suggest, at a minimum, the following two refinements to the proposed legislation that we believe will spur more innovative and cost-effective waste management programs in American communities and industries.

As previously stated, the NEDA RCRA Project is supportive of an integrated waste management approach -- one that recognizes the four options to deal with waste: reduction; recycling; treatment; and disposal. We believe that industry can lead the way in developing solutions with the appropriate combination of these options based on experience, technical expertise and in some cases, existing programs. Appropriate technologies and regional needs should be included for planning appropriate and achievable regional goals.

Secondly, the bill provides for State and Regional Planning and NEDA RCRA supports these. We would like to see other provisions included in the planning process, specifically, technology exchange; educational elements; and cost or economic factors. We strongly believe these are necessary before instituting specific plans which could result in unattainable goals. In addition, we believe that a clearinghouse, as proposed in Section 304, is needed to compile critical data and information about state management, technical and operational approaches to waste management, reduction, recycling etc... Industry, as a leader in the management of waste, has the technology, the expertise and the willingness to work with local, state and federal offices to initiate, support and implement an integrated approach to waste management needs. To do so, we advocate a vehicle which allows for information exchange in order to establish the most cost-effective and efficient ways to deal with the waste management problem.

In the last two decades the nation has made major strides in solving many environmental problems. The resources we have to offer have expanded and our commitment to a more healthful and clean environment will continue to grow stronger. We welcome the opportunity to discuss some specific ideas in more detail after this hearing.

The NEDA RCRA Project wishes to work with members of this committee and others in this RCRA Reauthorization in order to ensure that sections of this bill are dealt with in order to reach a realistic goal of protecting health, the environment and the economy.

I would be pleaseed to answer any questions you may have.

Thank you.

(RCRA):RC1026LAZ

Testimony

of

David G. Boltz

Manager of Environmental Regulatory Affairs -- Waste Management
Bethlehem Steel Corporation

On behalf of

American Iron and Steel Institute

Before the

Subcommittee on Hazardous Wastes and Toxic Substances

Of the
Committee on Environment and Public Works
U.S. Senate

on

S.2773

Waste Minimization and Control Act of 1988

September 26, 1988

Senator Baucus and members of the Subcommittee on Hazardous Wastes and Toxic Substances, my name is David Boltz. I am Manager of Environmental Regulatory Affairs - Waste Management in the Environmental Affairs Department of Bethlehem Steel Corporation. I am here today on behalf of the American Iron and Steel Institute (AISI), a trade association representing the iron and steel industry of the United States. The 43 domestic member companies of AISI account for over 80% of the nation's steel production capability.

Title I -- General Amendments

AISI strongly supports the Congressional intent of S.2773, the "Waste Minimization and Control Act of 1988". AISI agrees with the proposed national policy that the nation should give high priority to source reduction, to recycling, to material and energy recovery, to waste treatment, and to contained disposal of wastes so as to minimize the present and future threat to human health and the environment. Furthermore, AISI fully supports the national goal of recycling waste to the maximum extent consistent with market demand for recycled materials and the creation and strengthening of markets for recycled materials.

The steel industry is proud of its strong history of recycling. One of the major raw materials in steelmaking is steel scrap. The hot metal processes, which produce about 65% of all steel, utilize a combination of home scrap and scrap purchased in the market to make up approximately 30% of the ferrous materials going into steel products. Steel produced in electric furnaces, about 35% of today's production, is made entirely from scrap. Slags inherent to the steel making process are widely reused, with a large percentage recycled back to the iron making process. Ironmaking slags are widely used in cement production, as aggregates, and as building materials. Waste minimization has also been a major effort in the industry. The modern continuous casting processes produce yields of 90%, whereas earlier practices resulted in yields of about 70%; that is, they produced about 30% scrap.

These waste minimization and waste recycling operations have increased the competitiveness of our industry and have also reduced our waste disposal problems.

Under the present Resource Conservation and Recovery Act (RCRA), the regulatory emphasis by EPA and the efforts of industry have largely been devoted to hazardous wastes. The steel industry has responded to this by development and implementation of complex programs for the management of hazardous wastes. These are described in more detail in the report "Management of Steel Process Hazardous Waste" which was presented at the First World Industry Conference on Environmental Management in Washington, D.C. in June 1988. A copy of that report is attached.

AISI believes that it is timely that the Congress now turn its attention to the problems of solid wastes not classified as hazardous and to the general minimization of wastes and to recycling as a partial solution to solid waste problems. The steel industry has already instituted one program in this direction.

A number of steel companies have recently created a new association, the Steel Can Recycling Institute (SCRI), dedicated to the development and promotion of a comprehensive program for the recycling of post consumer steel food and beverage can scrap. In announcing the creation of SCRI, Robert Visokey, General Manager of Tin Mill Products for the LTV Steel Company said, "With the landfill era coming to an end because of municipalities running out of space, and concerns about environment increasing, the time has come for a comprehensive steel can recycling program. Recycling is a viable alternative that can go a long way towards alleviating part of the solid waste problem in this country". He went on, "The magnetic properties of steel make it the ideal recyclable material". A copy of the news release announcing the creation of SCRI is attached.

Members of AISI are committed to accepting and using recycled steel cans as a raw material in steel production. Members of SCRI are already recycling steel cans at their plants in 19 strategic locations. Thus, we believe that the steel industry is today moving towards the goals of S.2773.

Title II -- Solid Waste Management

Section 4010(a) would prohibit the storage, treatment or disposal of solid wastes without a state or federal permit. Existing solid waste facilities will be treated as having a permit if information required pursuant to Section 4011(a) is submitted within one year of enactment demonstrating that the facility is not releasing hazardous substances into the environment or is controlling such releases through a Section 3004 corrective action program.

We assume that the required "no releases" demonstration pertains to the unit which a company plans to continue to operate. It is our experience that the word "facility" is an imprecise term, sometimes used as a synonym for a solid waste management unit and sometimes as a synonym for an entire industrial plant. In order to remove this ambiguity, we recommend that the word "unit" be used when referring to solid waste landfills, etc.

Because many states do not have individual storage, treatment and disposal permit systems in place, or, if they do, they have not yet processed all pending permit applications, a large number of companies will be forced to rely on the "no release" demonstration to continue operation one year after enactment. Based on our experience with ground-water monitoring and analyses, we doubt if any steel company, or other chemical processor, could demonstrate in any time period that a land disposal unit is not releasing one or more of the hundreds of hazardous substances in any quantity to the environment. Moreover, I do not know of any steel plants that have controlled or are controlling any hazardous substance releases pursuant to Section 3004 of RCRA. It appears that the intent of this section is to provide a mechanism similar to the "interim status" provision in Subtitle C whereby existing units can continue to operate pending regulatory agency review of their permit applications. We do not disagree with the bill's intent of incorporating existing storage, treatment and disposal units into a regulatory system pending completion of state or federal permitting; however, we strongly recommend that a system similar to the interim status provision of RCRA

Section 3005(e) be established in lieu of the essentially impossible "no release" demonstration.

Section 4010(f) would limit the term of storage, treatment and disposal permits to ten years. It seems logical that some, if not most, permits would be renewable. However, the bill does not explicitly mention a procedure of permit renewal. We recommend that language be added to this subsection to clarify that storage, treatment and disposal permits may be renewed indefinitely for ten-year periods, if all required conditions are met.

AISI is concerned about the requirement to comply with any new or modified standards within 18 months of publication. We see no problem complying with additional or modified administrative, monitoring or analytical requirements, but we do envision impossible compliance problems if the additional or modified standards require retrofitting of landfills or surface impoundments. Any such major changes should be dealt with only at the time a permit is up for renewal. We recommend that this compliance requirement be modified appropriately.

Section 4011(a)(i) would require the Administrator to promulgate certain guidelines pertaining to design and operating standards for solid waste management facilities (units). Regulatory agency "guidelines" have historically been considered by the regulated community and the courts as different from duly promulgated regulations or standards, in that they do not have the force and effect of law. We recommend that this distinction be retained in S.2773 so as to avoid confusion in the future.

AISI is concerned about the effect of Section 4011(a)(ii) whereby certain solid wastes would be regulated under Subtitle C if regulations established for their solid waste category would be deemed inadequate to protect human health and the environment. AISI objects to what appears to be a "back door" approach to expanding the universe of "hazardous" wastes. Rather than classifying wastes as hazardous by default, we recommend that the minimum design and operating standards established for such wastes be modified to reflect pertinent sections of the hazardous waste regulations promulgated under Subtitle C.

Furthermore, with regard to Section 4011(a)(iv), AISI does not believe it necessary to require EPA to "specify any design or additional operating standard" for wastes which are excluded by petition from regulation as hazardous wastes (i.e., the so-called delisting process). Given the extremely rigorous chemical/physical requirements established by EPA for such exclusions, these delisted wastes are near the bottom of the scale in terms of relative hazard. Indeed, once a waste is delisted, it should be treated as any other solid waste for purposes of Subtitle D regulation.

At various places within Section 4011(b) the word "source" is used in different contexts, as follows:

- o the sources and volumes of the solid wastes within the category....(Section 4011(b)(1)
- o within each source category.....(proposed Section 4011(b)(4)
- o associated with any source in the category; (proposed Section 4011(b)(4)(G))

We recommend that a uniform context for the word "source" be employed throughout this section to avoid confusion.

Section 4011(n)(1) would force the shutdown of all surface impoundments four years after the date of enactment if such surface impoundments do not meet the minimum technological requirements of section 3004(o)(1)(A). While this requirement may be appropriate for some surface impoundments, depending on the nature of the wastes contained therein, it should not be universally applicable. For example, it should not apply to surface impoundments which are associated with NPDES-permitted outfalls, since such impoundments are used primarily as equalization basins for treated wastewaters. As a minimum alternative, we recommend that an owner/operator be allowed to demonstrate that a particular surface impoundment, although it may not meet Section 3004(a)(2)(A) standards, does not pose any current or potential threat to human health or the environment.

Title III -- Waste Reduction and Recycling Act of 1988

AISI supports the position expressed in Title III that waste reduction and recycling goals be set and that efficiency standards be set on the discharge of hazardous substances. AISI cannot agree, however, with the national performance efficiency standards proposed by Section 5001(a)(1) of the Act or the efficiency standards for hazardous substances proposed by Section 5005(a).

Section 5001(a) would require the Administrator to establish a national performance efficiency standard that total hazardous residuals including emissions, effluents, spills and managed wastes will not exceed 5% of production throughput. The term total hazardous residual is not defined. However, the emissions, effluents and managed wastes of many industrial processes inherently exceed not only 5% of production throughput, but in many cases production throughput itself. For example, in the steel industry 60,000 gallons of water, that's about 500,000 pounds of water, or 250 tons, is used in the production of each ton of steel. Even with a recycle rate of 98%, the effluent water from a steel making operation consists of several times the actual weight of steel produced. Slag wastes, which are the products of removal of impurities present in the raw materials, account for about one-half ton of wastes per ton of steel. Thus the selection of any single number as a release efficiency standard appears to be arbitrary and to reflect a lack of understanding of the diversity of industrial operations and of the waste production inherent in these operations. We recommend that, rather than specify a single statutory efficiency standard, EPA first carry out the analysis required under proposed Section 5005(a)(5), in which the Administrator shall study and report on waste efficiency rates by manufacturing categories and processes. The Administrator would then estimate the efficiency levels that each industry can reasonably be expected to achieve. Then, and only then, such standards should be developed on an industry specific basis.

Sections 5005(a)(6) and (b)(1) would require industries to install continuous monitoring equipment capable of detecting losses to the environment of any of the substances for which toxic chemical release forms are required under Section 313 of the Superfund Amendments and Reauthorization Act of 1986 (SARA). AISI agrees that industrial operations should know and make the public aware of releases of materials which can present potential dangers to human health and the environment. We believe, however, that the Title III reporting program under SARA provide this information in an adequate form. Requiring industrial operation to continuously monitor the many potential releases of the hundreds of chemicals required to be reported by Section 313 of SARA would impose an impossible burden on industry, would require monitoring capabilities far beyond today's available instrumentation, and yet would serve no useful purpose. AISI believes that there may be cases in which continuous monitoring of specific components in certain types of releases is justified. In those cases EPA should have the authority to require such monitoring. This is something, however, that should be established on a case-by-case basis. Recognizing that the normal measurement, calculation, and estimation techniques required by SARA provide adequate information in almost cases.

Section 5007 would charter and organize a National Packaging Institute. AISI believes this to be a very sound idea and encourages the Congress to establish such an Institute, one of whose goals would be to maximize recycling and reuse of packaging material. AISI would be glad to work with the National Packaging Institute in the establishment of national packaging standards. We believe that proper packaging standards would recognize the recyclability and degradability of steel products; thus, the packaging institute could contribute to the steel industry's competitiveness nationally and internationally as well as to the country's environmental good.

Section 6005(a) would require the Administrator to promulgate final procurement guidelines requiring the use of, among other things, recycled steel from discarded cans. As I mentioned earlier, the steel industry has recently initiated a major campaign to encourage recycling of cans, with a commitment to utilize can scrap in the production of steel. AISI believes that recycling of cans is commercially feasible as well as environmentally sound. It must be recognized, however, that the total amount of steel utilized in cans represents only a small part of steel production in this country, and that cans would make up only a small part of the available scrap even if all cans were recovered and recycled. Therefore, any guidelines developed under this proposed section must be realistic in their expectation of what level of recycle can be achieved. AISI would be happy to work with the Administrator in developing these guidelines.

Sub section 6005(b), a "hammer" provision to ensure that the guidelines mentioned in proposed Section 6005(a) are developed, would require that if these guidelines are not issued in a timely fashion, federal agencies would be required to purchase paper, plastics, steel, glass or aluminum containing a minimum 50% recycle content. With respect to steel, we believe that this provision is completely unreasonable. All steel contains a high proportion of recycle material. However, the processes of making steel from basic raw materials, i.e., iron ore, inherently cannot use as much as 50% recycle material. Therefore, such a requirement would limit all government purchases of steel to steel produced in electric arc furnaces. This would distort the market place for steel, and would impose restrictions not only on the basic steel industry but on the industries which supply it with raw materials, without in any way increasing the incentives to recycle steel products, including cans. Accordingly, we recommend against the adoption of this provision.

Conclusion

AISI generally supports the concepts contained in S.2773, the Waste Minimization and Control Act of 1988. We agree with the policies expressed in the bill, and with the general approach of applying proper controls to the management of all solid wastes to minimize the generation of wastes and to maximize the recycling of all materials. We specifically support the programs to increase the recycling of steel cans and would be happy to work with the government in the development of regulations for this purpose. We believe, however, that a number of provisions dealing with permits for solid waste operations and with specific aspects of the program to encourage recycling will not achieve the ends of the Act. We ask that these views be taken into consideration in the development of this legislation.

We appreciate this opportunity to present before the committee our viewpoints on this proposed legislation. I would be happy to answer any questions you may have about our positions on this matter.

969S

FROM: Ketchum Public Relations
Six PPG Place - Pittsburgh, Pa. 15222-5488
Contact: Kent Schoffstall - (412) 456-3864

FOR: Steel Can Recycling Institute

FOR IMMEDIATE RELEASE

Leading Steel Companies Create
Steel Can Recycling Institute;
Appoint Kurt Smalberg President

PITTSBURGH, PA. -- The creation of an association dedicated to the development and promotion of a comprehensive recycling program for steel food and beverage cans was announced today by Robert Visokey, general manager of Tin Mill Products for the LTV Steel Company.

Visokey, who will be chairman of the association, said it will be called the Steel Can Recycling Institute (SCRI). The association will be headquartered in Pittsburgh where it is expected to open its offices and begin operating within the next 90 days. The project is supported by six domestic producers of tin plate products and the American Iron and Steel Institute.

Visokey also announced that Kurt Smalberg has been appointed president of the SCRI. He called Smalberg one of the foremost recycling experts in the United States, adding, "Kurt has an excellent background with more than 30 years of experience in metals industry management. He has a wealth of knowledge about recycling."

Smalberg will assume responsibility for developing, directing and promoting plans for steel can recycling. He was most recently executive vice president of the National Association of Recycling Industries.

In explaining the reason for the creation of the SCRI, Visokey said, "With the landfill era coming to an end because municipalities are running out of space and concern about the environment increasing, the time has come for a comprehensive steel can recycling program. Recycling is a viable alternative that can go a long way toward alleviating part of the solid waste problem in this country."

He noted that about 30 billion steel cans are made in the United States every year, and said, "We want to ensure an ever increasing amount of them are reclaimed for use in the steel-making process.

"If steel can recycling is not already taking place in American communities, it should be," Visokey said. "We want municipal officials, legislators, homeowners and others to know we're here to lend guidance and support to their efforts to deal with a serious problem."

Visokey said the members of SCRI are already recycling steel cans at their plants in 19 strategic locations.

"The magnetic properties of steel make it the ideal recyclable material," he said, adding that more than 50 million tons of steel scrap were used to produce new steel products last year. "People have been recycling steel for centuries."

(More)

Smalberg called his appointment "a challenging assignment but a vital one for America's environmental well-being." He said, "Solid waste disposal affects everyone because of diminishing landfill options."

According to Smalberg, his first task will be to set up the SCRI office in Pittsburgh. He said that specifics about the SCRI and its long-range plan are being developed with input from members of the association, the American Iron and Steel Institute and other interested parties, such as environmental interest groups and civic organizations.

Smalberg said the focus will be on the recycling of post consumer steel scrap in municipal waste. He said additional objectives will include educating the public about steel can recycling and encouraging the creation of an infrastructure to distribute, receive and recycle steel cans.

In addition to his work with the National Association of Recycling Industries in Los Angeles, Smalberg spent 23 years with the Federated Metals Corporation and seven years as president and chief executive officer of the Pacific Smelting Company. Both companies were active in the recycling business.

He has a bachelor of science degree in chemical engineering from City College of New York and a masters degree in business administration from the New York University Graduate School of Business Administration.

The SCRI is supported by the six domestic producers of tin plate products. They are also members of the Tin Mill Products Producers Committee of the American Iron and Steel Institute. They are: Bethlehem Steel Corporation, LTV Steel Corporation, National Steel Corporation, the USS division of USX Corporation, Weirton Steel Corporation and Wheeling Pittsburgh Steel Corporation.

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FIRST APPENDIX

MANAGEMENT OF STEEL PROCESS HAZARDOUS WASTE

BACKGROUND

Hazardous wastes have become the subject of increasing concern even though such wastes represent less than 1 percent of the total waste produced in the United States.(1) Until the late 1970s, the emphasis had been with problems of clean air and water. Now, major efforts by industry and government are translating the concerns of hazardous waste into effective management and environmentally sound disposal of these wastes.

The Resource Conservation and Recovery Act ("RCRA")(2) and the Comprehensive Environmental Response Compensation and Liability Act(3) (referred to herein as "CERCLA" but also commonly referred to as "Superfund") provide an appropriate statutory base to address both the treatment of waste at its source and the cleanup of sites that present a threat to public health and the environment.

RCRA, covering hazardous wastes, establishes a regulatory process that controls wastes from the moment of their generation to their final disposal in an environmentally safe manner. The major provisions of the Act establish the criteria for identifying hazardous wastes, a manifest system to tag wastes and track them through and beyond final disposal, and a permit system based on performance and management standards for hazardous waste treatment, storage and disposal.

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(1) Council on Environmental Quality, "Environmental Quality 1981 12th Annual Report", Washington, D.C., 1981.

(2) Resource Conservation and Recovery Act of 1976 (42 U.S.C. 6901).

(3) Comprehensive Environmental Response, Compensation and Liability Act of 1980 (42 U.S.C. 6901).

CERCLA establishes a program to eliminate the threats from uncontrolled hazardous waste sites and to remove hazardous substance threats to public health and the environment. The program has the following four basic elements:

First, it establishes an information-gathering and analysis system which will enable federal and state governments to characterize disposal site problems more accurately and to develop priorities for their investigation and for a response.

Second, it establishes federal authority to respond to hazardous substance emergencies and to clean up leaking disposal sites. Federal response actions are authorized in cases in which the responsible party either cannot be found or does not take the required actions.

Third, it creates a "Hazardous Substance Response Trust Fund" to pay for the removal, remedy, and cleanup of released hazardous substances and hazardous waste sites. The present fund of $1.6 billion is financed over a 5-year period with primarily a special tax on the sale and importation of petrochemical feedstocks, crude oil, and other specified chemicals.

Fourth, it establishes broad classes of potentially liable persons, including the owners and operators of the property and the generators of the substances, who may be held accountable for clean-up and restitution costs.

U. S. STEEL PROGRAM ON HAZARDOUS WASTE

U. S. Steel Corporation has a two-part program on hazardous waste which is consistent with the Corporation's effort to meet the challenge of environmental protection with cost-effective procedures. First, the Corporation has a commitment to the concept of private action to accelerate hazardous waste cleanup. This has been provided through the support of Clean Sites, Inc., a non-profit corporation to promote voluntary cleanup of hazardous waste sites by industry. The second part is directed towards the elimination or significant reduction of the Corporation's disposal of hazardous waste. This is being accomplished by (1) substituting materials which will not result in generation of a hazardous waste, (2) treating hazardous wastes prior to disposal to render them non-hazardous, and (3) reusing or recycling materials which if disposed would be considered hazardous.

CHARACTERIZATION OF STEEL INDUSTRY SOLID WASTE

Exhibit I, located in the pocket on the inside back cover, is a simplified road map through the complex world of steelmaking. The illustrated integrated steel mill performs all the operations needed to convert the raw materials (iron ore, coal, and flux material) into finished products. Principal operations consist of coking, sintering, blast furnace iron making, steelmaking via the basic oxygen furnace, electric arc furnace, or open hearth furnace, continuous casting, hot and cold rolling, and various finishing operations.

From this overall view, one major point emerges. The production of steel is essentially an extractive process and, therefore, each process generates materials that are not considered the primary product (see Exhibit II). For every ton of steel shipped from an integrated plant, approximately one and one-half tons of materials are produced that are not steel product.

Exhibit II

Process	Product	Waste Product (Hazardous in Bold Print)	Preferred Waste Management Technology
COKING	Coke	Coke Breeze	Sale, recycle
		Ammonia Still Lime Sludge	Landfill or elimination
		Tar Sludge	Recycle as fuel or carbon source
		Water Treatment Plant Sludge	Secured landfill
IRON MAKING	Hot Metal	Blast Furnace Slag	Sale
		Blast Furnace Dust	Recycle for iron oxide
		Blast Furnace Sludge	" " " "
STEELMAKING			
Open Hearth	Steel	Open Hearth Slag	Recycle for iron oxide
		Open Hearth Dust	" " " "
Basic Oxygen Fce.	Steel	BOF Slag	Recycle for iron oxide
		BOF Dust	" " " "
		BOF Sludge	" " " "
Electric Arc Fce.	Steel	**EAF Slag**	Secured landfill
		EAF Dust	" "
		EAF Sludge	" "
Agglomeration	Sinter	Sinter Fines	Recycle for iron oxide
		Sinter Dust	" " " "
Semi-Finishing	Steel	Continuous Casting Scale	Recycle for iron oxide
		Continuous Casting Sludge	" " " "
		Soaking Pit Scale	" " " "
		Primary Mill Scale	" " " "
		Primary Mill Sludge.	" " " "
Finishing	Finished Steel Products (bars, beams, rail, pipe, sheet, wire, tin mill prod. other coated steel prod.)	Hot Rolling Scale	Recycle for iron oxide
		Hot Rolling Sludge	" " " "
		Cold Rolling Scale	" " " "
		Cold Rolling Sludge	" " " "
		Pickle Liquor Sludge	Recycle or sale
		Galvanizing Sludge	Recycle for iron oxide
		Tin Plating Sludge	" " " "
		Scrap Metal	" " " "
Miscellaneous	All processes	Brick & Rubble	Secured landfill
		Garbage	" "
		Solvents	Recycle or eliminate
		Oils & Greases	Recycle or fuel

The typical wastes from the iron and steel process include slag, scrap, sludges, scale, dust, oil and grease, solvents and other miscellaneous materials. More than 97% of these wastes are non-toxic and non-hazardous.(4) Materials defined as hazardous are divided among three categories as shown in Exhibit III. The relative percentage of waste contributed by each category is also shown in this table.

Exhibit III

U.S. Steel Industry Hazardous Waste Generation For 137,800,000 Tons of Raw Steel (5)(6)

	Percentage
Spent Pickle Liquor from Steel Finishing Operations (7)	87
Emission Control Dust/Sludge from the Production of Steel in Electric Furnaces	9
Coke Plant Wastes: Still Lime Sludge, Decanter Tar Sludge	2
Miscellaneous	2
Total	100

U. S. STEEL HAZARDOUS WASTE RECYCLE/REUSE PROGRAM

The majority of U. S. Steel Corporation's solid waste historically has been recycled. Most of this material is non-toxic and non-hazardous, including slag and iron oxide bearing wastes in the form of mill scale, scrap, and blast furnace dusts and sludges. Efforts have been directed toward the elimination or reduction of small quantities of steel process hazardous wastes through recycle and reuse. Some of the ongoing programs are described next.

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(4) American Iron and Steel Institute, "Comments Before U.S. EPA on Recycle and Reuse of Hazardous Waste", Washington, D.C., August 1980.

(5) Research Triangle Institute, "Environmental and Resource Conversation Considerations of the Steel Industry Solid Waste", U.S. Environmental Protection Agency, Washington, D.C., April 1979.

(6) 40 CFR 261, 46 FR 4614, January 16, 1981. Final List of Hazardous Wastes.

(7) AISI Public Comments to U.S. EPA on Recycle, Reuse, Reclamation, August 18, 1980.

SPENT PICKLE LIQUOR — CONVERSION TO USEFUL MATERIALS

The largest portion of hazardous waste generated by the steel industry is spent pickle liquor. This waste is generated in the pickling process — a process to remove scale and other surface defects from steel by immersion in a bath of acid. The spent pickle liquor is the acid that has been weakened through use to the point where it is unable to remove scale from the steel. The pickle processes are performed either on a continuous or batch basis.

Pickling acids are mainly hydrochloric or sulfuric. If sulfuric acid pickling is used, the spent pickle liquor will contain ferrous sulfate; if hydrochloric acid is used, it is ferrous chloride. Spent pickle liquor will contain anywhere from 10% to 25% iron salts and 1% to 8% acid, depending on the type of acid and type of steel pickled.(8)

In the past, spent pickle liquor had been disposed of by neutralization and landfill or by deep well injection. However, because of the presence of ferrous chloride, spent hydrochloric pickle liquor is being sold as a replacement for ferric chloride as a coagulant in municipal sewage treatment plants. It is anticipated that this type of reuse will continue as experience continues with the favorably priced spent pickle liquor as a water treatment chemical.

Spent pickle liquor is also used for the destruction of hexavalent chrome (conversion to trivalent chrome) that is generated from the galvanize and tin lines. Additional quantities of waste pickle liquor are sold for utilization in other industrial chrome destruction applications.

In those instances where pickle liquor is not reused or recycled, it is neutralized. This neutralized waste was presumed by the U.S. Environmental Protection Agency to be hazardous because of the diversity of processes used by different companies. Pickle liquor sludge was designated a hazardous waste because many industries generated a sludge that contained organic materials. The organic waste was a concern to the U.S. Environmental Protection Agency because of its potential interference with the effective lime neutralization of the pickle liquor. The Corporation reviewed its sludge generation practices and found its waste not to be contaminated with organics. Further, the U.S. Environmental Protection Agency hazardous waste tests indicated that the sludge should not be designated as a hazardous waste. U. S. Steel utilized the delisting provisions of the RCRA regulations to drop from the hazardous waste list the neutralized pickle liquor sludge generated at its steel finishing operations. This prevents valuable hazardous waste landfill space from being occupied by the non-hazardous pickle liquor sludge.

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(8) Research Triangle Institute, "Environmental and Resource Conversation Considerations of the Steel Industry Solid Waste", U.S. EPA, April 1979.

STEELMAKING, SEMI-FINISHING AND FINISHING DUSTS AND SLUDGES

Several steelmaking, semi-finishing and finishing dusts and sludges generated at U. S. Steel facilities have been characterized as hazardous by the U.S. Environmental Protection Agency. The electric arc furnace (EAF) dust and sludges from Corporation facilities contain iron oxide and small percentages of heavy metals such as chrome, nickel, zinc and lead. The concentration of these metals is somewhat higher than can be found in other steelmaking process dusts because of the higher usage of scrap in electric arc furnace steelmaking.

EAF dust is currently being landfilled. However, investigations have been initiated into recovery of iron from the dust and sludges. Lower volume quantities of dust and sludges from semi-finishing and finishing processes potentially could be characterized as hazardous by U.S. Environmental Protection Agency. One such waste is the sludge generated at a water treatment plant that processes water from a galvanize finishing operation. To avoid possible hazardous waste concerns with the sludge which has a high zinc content, the sludge is sold to metal processors for zinc reclamation.

COKE PLANT WASTES

The gas which leaves the coke ovens is cooled with flushing liquor. The liquor also collects condensible tar products, particulates and other materials from the coke oven gas. The flushing liquor is processed in a tar decanter to separate tar products that can be further processed from other, heavier materials. The waste material separated at the tar decanter is known as tar decanter sludge. The tar sludge contains coal and coke particulates, tar, and other materials that have a consistency which makes it difficult to handle. The tar decanter sludge has a high carbon content making it a potentially valuable resource. U. S. Steel is currently investigating the processing of tar decanter sludge and other tar processing sludges through a ball mill to generate a semi-fluid product that can be used for fuel injection into blast furnaces and open hearth furnaces. Another investigation involves the recycle of the sludge through the coke ovens.

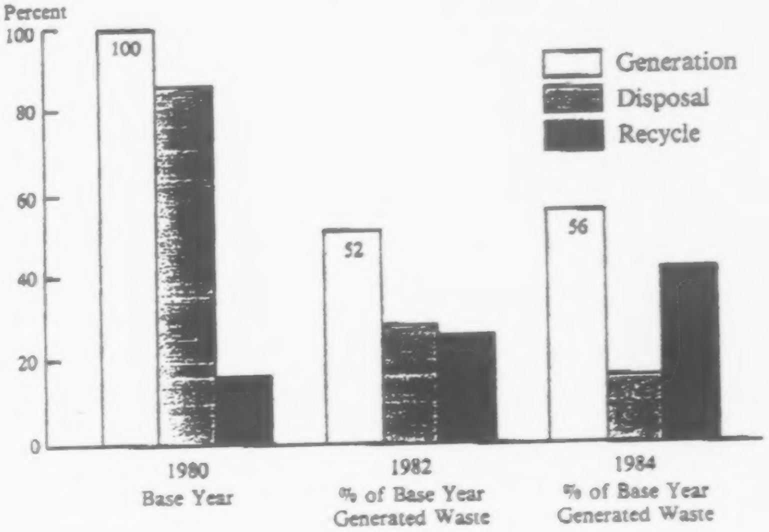
U. S. STEEL PROGRESS IN HAZARDOUS WASTE MANAGEMENT

The recycle/reuse of most steel process hazardous materials has been performed by the steel industry for many years. Additional recycle/reuse programs that are rather recent have resulted in significant progress in meeting the Corporation's goal of eliminating or reducing hazardous wastes.

It is projected that at the end of 1984, U. S. Steel operations will have reduced generation of hazardous waste by approximately 40% and disposal of such waste by 80%. Reuse and recycle in this time will have increased by approximately 200%. See Exhibit IV.

Exhibit IV

U. S. STEEL CORPORATION
HAZARDOUS WASTE MANAGEMENT PROGRAM



Clearly, U. S. Steel has made a positive commitment to the beneficial reuse and recycle of hazardous wastes. As programs proceed, the Corporation plan will result in a minimal volume of hazardous waste that will require disposal.

QUESTIONS OF SENATOR DURENBERGER
FOR DAVID BOLTZ
BETHLEHEM STEEL CO., AMERICAN
IRON AND STEEL INSTITUTE

Recently, with the cosponsorship of Senator Baucus I introduced S. 2788, legislation dealing with corrective action requirements for steelmaking and primary aluminum smelter facilities. Although sections 3004(u) and 3008(h) are part of the hazardous waste regulatory provisions of RCRA, the wastes and the units those sections address are ordinary solid wastes never regulated as hazardous. RCRA now requires the cleanup of any release of a hazardous constituent from a leaking solid waste management unit, no matter when the waste was placed in the unit.

Although EPA has not yet promulgated regulations fully implementing section 3004(u), I have become concerned that for the steel and aluminum industries, these provisions could be interpreted in a way that would be very costly, perhaps beyond the ability of the industry to bear, and beyond what is necessary to protect human health and the environment.

One example of this is the possible interpretation that each leaking solid waste management unit might have to be cleaned up to meet environmental standards at the boundary of the unit. A large operating steel plant might include dozens of such units, multiplying the costs. Yet it is unlikely anyone could ever be exposed to contamination from one of those units until it passed the facility property boundary.

That is the fundamental approach of my bill, S. 2788, to make it clear that corrective action for steel and aluminum facilities means compliance with groundwater protection standards at the facility property boundary, not at the edge of the various solid waste management units within the total facility. Obviously, this principle would apply to any soil protection standards as well; just like groundwater, your concern with soil would begin at the facility property boundary.

Senator Baucus and I were able to develop this legislation in consultation with you and other representatives of the steel and aluminum industries. I want to thank you for your help, and the well-reasoned manner in which you approached this problem. For the record of our 1988 hearings on RCRA reauthorization, I would like to ask you several questions, to be answered in writing at your earliest convenience:

1) I am aware of the study of steel industry disposal practices and the potential effect of

implementation of section 3004(u), that suggests a typical steel plant may cost in excess of $40 million to comply with corrective action requirements. I understand the approach in S. 2788 could lower the costs to as little as $8 million per facility.

A) How would S. 2788 change your cleanup strategy at a typical steel plant?

B) How would you assure that human health and the environment would be protected at a steel plant, if this legislation were adopted?

2) I understand there is a need for early action on this legislation, and that it may not be possible to wait until the larger RCRA reauthorization bill is acted upon. Please give us your views on the urgency of action on S. 2788.

3) I am concerned about the relationship of section 3004(u) requirements to EPA's policy of deferral of Superfund action on sites "eligible" for cleanup under RCRA. We are trying to get the Agency to use a unified system for cleaning up all similar sites, and to use the Superfund authorities to encourage or provide prompt cleanups. Under their current policy, however, a site which can be cleaned up under RCRA, through section 3004(u) or section 3008(h), for example, would not be cleaned up under Superfund. It seems to me, therefore, that if a steel industry site formerly handling hazardous waste were closed, and under consideration for Superfund action, the responsible party could approach EPA and ask that a section 3008(h) order for the facility be issued, or a section 3004(u) permit. Under their policy, EPA would defer to the RCRA authorities, and in applying section 3008(h) or 3004(u) would also apply the point-of-compliance established under S. 2788, even to a closed facility. This would provide for the consistent application of this principle in Superfund and RCRA cases addressing similar facilities. Do you agree with this interpretation?

4) The wastes addressed by section 3004(u) are "non-hazardous" solid wastes like those covered by S. 2773. Several provisions of S. 2773 require corrective action, though none specifically deal with the continuing release problem, requiring cleanup of leakage from waste management units regardless of when the waste was placed there. If the Committee decides to impose on the management of subtitle D wastes a corrective action requirement similar to section 3004(u), should the policy of S. 2788 apply to those wastes and units as well, for the steel industry?

RESPONSES OF DAVID G. BOLTZ
BETHLEHEM STEEL CORPORATION
ON BEHALF OF
AMERICAN IRON AND STEEL INSTITUTE
TO QUESTIONS POSED BY
SENATOR DURENBERGER
SEPTEMBER 26, 1988

Thank you for the opportunity to comment on S. 2788, a bill of great importance to the steel industry, and thank you and Senator Baucus on behalf of the American Iron and Steel Institute for your leadership in introducing this legislation. We intend to remain cooperative in developing this legislation, and urge early action on it. While we have submitted detailed comments on S. 2773, and intend to work with you as that legislation is considered by the committee, the corrective action issues addressed by S. 2788 are the steel industry's highest priority among the subtitle C matters that the Congress may consider during the RCRA reauthorization process.

Our answers to your specific questions follow:

1)A) As you mentioned, the American Iron and Steel Institute commissioned an analysis by REMCOR, Inc., of potential corrective action compliance costs. That study examined a hypothethical integrated steelmaking facility with 3 million tons per year of steelmaking capacity. This facility, whose characteristics are based on data from actual plants, would have been disposing of solid waste on-site since the early part of this century. Many separate types of units that once handled solid waste would be included in a single steelmaking facility. The facility analyzed, like most steelmaking facilities, is located next to a body of water.

The releases of hazardous constituents studied primarily involved contamination of groundwater. Cleanup of groundwater contamination can be very expensive. A major element of the costs identified in the REMCOR study were the costs of removing the original sources of hazardous constituents from the solid waste management units, a step that might often be necessary if the unit itself were required to meet maximum contaminant levels (MCLs) or other groundwater protection standards.

If S. 2788 were enacted, the steel industry would be required to meet groundwater protection standards at the facility property boundary. It ordinarily would not be necessary to select corrective measures involving source control (that is, the extensive removal or treatment of the large quantities of solid waste and hazardous constituents in the solid waste management units). Instead, a steelmaking facility would be able to use measures such as controlling the amount of water entering contaminated areas, with intercept wells, counterpumping, hydrologic isolation of contaminated groundwater, and treating of contaminated groundwater before it reached the facility property boundary. In some areas, only monitoring would be necessary in the near term, as no plume may yet have approached the property boundary. In addition, an operating steelmaking facility would rely on institutional controls to assure that no part of the general population came in contact with the hazardous constituents contained within the plant boundary.

These measures would reduce the costs of corrective action, particularly for a steelmaking facility in an unglaciated river valley setting, from an estimated $40 million per facility (or as much as $1.5 billion for the steel industry as a whole) to approximately $8 million per facility. With your permission, I would like to submit the executive summary of the REMCOR study, together with the April 1988 REMCOR report entitled "Continuing Releases/Corrective Action Study: Effects of Proposed Revisions in Point of Compliance", for inclusion in the Hearing Record.

1)B) Although the control measures we would use would be less costly, the approach taken in S. 2788 would lead to no more exposure of the public to hazardous constituents. The facility boundary point-of-compliance for groundwater protection standards would provide equivalent protection for human health and the environment. With institutional controls to assure that no member of the general public comes into contact with the hazardous constituents within the facility, this degree of protection is assured, not only during the operational life of the facility but for a period of 30 years after industrial operations at the facility cease.

In addition, subparagraph (B) requires a steelmaking facility to monitor groundwater not only at the facility property boundary, but also at points within the facility, as indicated by the hydrogeology, to assure that contaminated groundwater never reaches the boundary and that the general public is never exposed to it. If a plume is detected moving toward the facility property boundary at any time in the future, additional corrective measures must be taken to assure it does not cross the boundary.

Integrated steelmaking facilities that are in operation now are expected to remain in operation for a long time. Under subparagraph (C), however, upon cessation of industrial operations at such a facility, a fund or other assurance of financial responsibility must be established to assure that monitoring and other corrective measures will be carried out for 30 years after the industrial operations have ceased. While this 30-year period is similar to the period required by EPA regulations for post-closure monitoring of hazardous wastes facilities, it is not keyed to the closure of any hazardous waste treatment, storage or disposal unit originally giving rise to the section 3004(u) requirements at the facility. Subparagraph (C) provides for 30 years beyond the operating life of the steelmaking facility itself, and that is a substantial measure of protection for human health and the environment. If there is any threat to human health or the environment from solid waste management units within the facility during that time or at the end of that time, additional corrective measures have to be taken.

While some steel companies may have no problem establishing facility-specific funds, posting bonds or finding other mechanisms of financial responsibility to comply with subparagraph (C), you may wish to consider an industry-wide fund with a dedicated, fee-based or production-based revenue source to assure that this provision does not have the unintended effect of prematurely forcing facilities out of the steelmaking business, or of locking them in after they are no longer economical.

2) EPA has not yet proposed regulations to fully implement section 3004(u). Once proposed, they would be promulgated about a year later, and take effect six months after that. In the meantime, however, section 3004(u) requires that every permit that is issued require corrective action. Many permits for land disposal facilities will be issued in the near term, as a result of section 3005(c)(2). Action under the corrective action compliance schedules in those permits will begin immediately. Guidance on what level of control is required must be given at the earliest possible time, to avoid the commitment of resources to unnecessarily stringent cleanups. It is also possible that a major RCRA reauthorization bill will not be completed until the end of the next Congress, and final corrective action regulations may become effective before that. It is also likely that EPA and the States will use the proposed regulations as guidance in writing the corrective action portions of permits before the regulations are final or effective.

3) The steel industry would like to see the basic policy of S. 2788 followed in Superfund cleanups of facilities covered by this bill. Whether a facility has been closed

previously or not, if section 3004(u) or section 3008(h) can be applied to the facility, the provisions of S. 2788 should apply to corrective action at that facility.

4) The imposition of a continuing releases/corrective action requirement for subtitle D wastes would be a dramatic expansion of the universe to which corrective action applies. Many of the integrated steelmaking facilities will already be subject to section 3004(u) because of the presence of a hazardous waste treatment, storage or disposal unit. Any that are not would be affected by extending the corrective action requirements to subtitle D wastes generally or to industrial solid wastes. If the Committee seriously considers such an expansion, it is critical for the steel industry that at a minimum the facility property boundary point-of-compliance be adopted in that context as well.

EXECUTIVE SUMMARY

CONTINUING RELEASES/CORRECTIVE ACTION STUDY

FOR HYPOTHETICAL IRON AND STEELMAKING FACILITY

PREPARED FOR

AMERICAN IRON AND STEEL INSTITUTE
WASHINGTON, DC

OCTOBER 1987

AISI PROJECT NO. E0I-6

REMCOR PROJECT NO. 87311

REMCOR, INC.
PITTSBURGH, PENNSYLVANIA

EXECUTIVE SUMMARY

INTRODUCTION AND OVERVIEW

On behalf of the American Iron and Steel Institute (AISI), Remcor, Inc. (Remcor), of Pittsburgh, Pennsylvania has completed a study of the cost of compliance with the Continuing Releases/Corrective Action Program (CR/CAP) required under Section 3004(u) of the Resource Conservation and Recovery Act (RCRA) at a hypothetical iron and steelmaking facility. A typical (hypothetical) steelmaking facility was developed, complete with operating history and quantities of solid wastes generated and disposed. The steelmaking facility operated from 1910 through 1987, producing, on the average, 2,500,000 tons per year of raw steel via the open hearth or basic oxygen processes and 500,000 tons per year of steel via electric arc furnaces (EAFs) since 1960. Studies required by the CR/CAP were outlined, results were postulated, and corrective measures were defined in detail for the steelmaking facility in an Unglaciated Major River Valley Setting. The costs for the studies, corrective measures design, and implementation of corrective measures were then established for this setting, with appropriate sensitivity evaluation of implementation costs, focusing on the extent of cleanup required. As a further check on the reliability of the estimated cost of compliance, Remcor examined variabilities in feasible corrective measures and the respective costs of their implementation at a Glaciated River Valley Setting and a Lakefront Setting.

These costs are summarized as:

Capital Costs*

	Unglaciated Major River Valley Setting	Glaciated River Valley Setting	Lakefront Setting
Investigation	2.5	2.6	2.5
Implementation	32.0	36.4	35.7
Total Capital Cost	34.5	39.0	38.2

Annual Operating and Maintenance Costs*

Operation and Maintenance (O&M) Cost	0.566	0.560	0.555

Total Present Worth Cost*

Capital and O&M Cost	39.8	44.3	43.5

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*All costs reported in millions of dollars.

BACKGROUND

The Hazardous and Solid Waste Amendments (HSWA) to RCRA, enacted in 1984, significantly broadened the scope of regulatory control available to the Environmental Protection Agency (EPA). Prior to HSWA, the EPA could require corrective action under 40 Code of Federal Regulations (CFR) Part 264, Subpart F, at RCRA-regulated hazardous waste units that were known or found to be releasing contaminants to ground water. As interpreted by the EPA, HSWA's CR/CAP, incorporating Section 3004(u) of RCRA, expanded the regulatory program with regard to those treatment, storage, or disposal facilities (TSDFs) in three significant areas:

- Regulation of actual and/or potential releases was expanded to include all media
- Releases of hazardous wastes and hazardous waste constituents from solid waste management units (SWMUs) must be evaluated at all facilities seeking RCRA permits
- The CR/CAP includes current or potential future releases resulting from disposal practices regardless of when the disposal occurred.

Steel plants are typically older facilities of appreciable land area and diversity of waste production and management over their operating life. Large quantities of solid wastes are generated. Most of these wastes have been placed in land disposal units on site, subject to minimal regulatory requirements at the time of disposal. As a result, although RCRA hazardous wastes (as defined in accordance with RCRA regulations that became effective in 1980) other than spent pickle liquors accounted for less than 0.5 percent of wastes generated at the typical steelmaking facility over its 77-year operating life, the lack of segregated disposal practices may have resulted in the intermixing of wastes containing hazardous constituents with relatively innocuous solid wastes (e.g., typical steelmaking slags).

The current study examines two aspects of the HSWA CR/CAP found at Sections 3004(u) (Corrective Action for Continuing Releases at Permitted Facilities) and 3004(v) (Corrective Actions Beyond the Facility Boundary). The scope of these authorities is largely defined by their key terms. They require that the RCRA permit process impose corrective action for releases of hazardous constituents which pose a threat to human health and the environment, from any SWMU at a TSDF seeking a RCRA permit. SWMUs are defined as discernible waste management units at a RCRA facility (e.g., an entire steel plant) from which hazardous constituents might migrate, irrespective of whether the unit was originally intended to manage solid or hazardous wastes(1,2). Typical SWMUs at a steelmaking facility could include the coke by-products area (in general), landfills, lagoons, storage tanks, wastewater treatment plants, and transfer stations.

The CR/CAP consists of four components, as outlined in the "Draft National RCRA Corrective Action Strategy"(1) and noted below for reference:

- RCRA Facilities Assessment (RFA)
- Interim Corrective Measures Assessment
- RCRA Facilities Investigation (RFI)
- Corrective Measures Study (CMS) and Corrective Measures Implementation.

The objective of the RFA is to identify SWMUs characterized by actual or potential continuing releases of hazardous constituents.(2) The RFI is conducted pursuant to a permit schedule of compliance to verify the release(s) identified in the RFA and to obtain adequate data to be used in developing effective corrective measures in the CMS.(3)

STEEL PLANT FACILITIES AND WASTE MANAGEMENT PRACTICES

The Unglaciated Major River Valley Setting was used as a benchmark in the study. An initial analysis indicated that the effect of geographic location on cost of compliance is less significant than the number, configuration and composition of the SWMUs and the extent of corrective measures required at specific SWMUs. Therefore, discussions of the variation in cost of compliance at the same hypothetical plant located in Glaciated River Valley and Lakefront Settings were developed in less detail and were discussed with reference to the benchmark setting.

UNGLACIATED MAJOR RIVER VALLEY SETTING - BENCHMARK SETTING

The steelmaking facility shown in Figure ES-1 occupies about 2,700 acres, and is generally bisected by the Major River. The facility originated on a fill bench along the west bank of the river, and initially consisted of cokemaking, sintering, ironmaking (blast furnaces), steelmaking (open hearths), and primary forming units. Due to constraints imposed by topography, and the need to be close to the river for importation of raw materials, the western portion of the facility was forced to assume an elongated configuration. In the process of creating the fill bench, it was necessary to backfill two surface drainages, piping the surface water through the fill to the river.

Figure ES-2 summarizes the operating history of the steelmaking facility from 1910 through 1987, and identifies waste disposal practices over the years. Table ES-1 is a summary of waste distribution at the steelmaking facility, and may be used in conjunction with Figure ES-1 to visualize the major SWMUs and their respective contents at the Unglaciated Major River Valley Setting.

RESULTS OF THE RFA - BENCHMARK SETTING

The RFA performed at this setting identified the following SWMUs and areas with documented or potential continuing releases:

- Coke by-products area
- Combined landfill-west
- West plant industrial fill
- Combined landfill-east
- Terminal treatment plant
- East plant industrial fill
- Aboveground storage tanks (40)
- Underground storage tanks (30)
- Transfer stations (35)
- Container storage areas (4).

RESULTS OF THE RFI - BENCHMARK SETTING

The RFI was configured as a phased study. The Phase I RFI verified the continuing releases, screening the large list of potential SWMUs in the RFA to a group that merits further study and possible implementation of corrective measures. The Phase II RFI characterized the sources of hazardous constituent releases and the extent to which constituents have migrated from the sources into the surrounding environment. The Phase II study provides the information necessary to permit the CMS to effectively evaluate possible corrective measure alternatives.

In addition to the volume of solid wastes generated and disposed on site that may need to be addressed via corrective measures, the facility is characterized by a large number of individual SWMUs. In particular, numerous tanks and transfer stations are located throughout the facility. Many of these may constitute SWMUs if they are found to be associated with "routine, deliberate, and systematic spillage."(1) The typical facility defined in this study was found to have 40 aboveground tanks, 30 underground tanks, and approximately 35 transfer stations, comprising a total of over 100 potential, individual SWMUs.

Due to the nature of the solid wastes produced and ultimate on-site land disposal, ground water was found to be the principal medium of concern, both from the perspective of a receptor of contamination, and a source of intermedia transport to surface waters. Air emissions were not found to be significant due to the low probability of volatilization or fugitive dust generation from the SWMUs. Surface water contamination was found to occur only as the result of intermedia transport via ground water and, therefore, does not represent a separate issue to be addressed in corrective action. The Phase II RFI study actually entailed a detailed examination of the hydrogeologic conditions present and a characterization of the nature and extent of ground water contamination.

Through the RFI process, major areas of solid waste disposal were defined at the facility. These areas resulted from the disposal of slags, sludges, and dusts generated in iron and steel production and associated air and water pollution control units. Slag was used as a construction material in extending the original fill bench along the west bank of the Major River, and in creating a fill bench on the east. Primarily for engineering reasons, none of the dusts, sludges, or semi-solid/liquid waste materials was placed in these fills. As a result, the fill benches were not found to be associated with release of hazardous constituents.

The RFI defined the following SWMUs, and individual areas within each SWMU, at which continuous releases were either documented or potentially occurring:

- Coke By-Products Area:
    - Former coal tar decanter sludge lagoon
    - Former biosludge lagoon
    - 50,000-gallon by-products storage tank (leaking)
    - General by-products area
- Combined Landfill-West:
    - Degreaser drum disposal area
    - Coal tar decanter sludge disposal area
- Combined Landfill-East
- Additoinal Minor SWMUs:
    - Terminal treatment plant
    - 10 aboveground storage tanks
    - 10 underground storage tanks
    - 10 transfer stations.

CORRECTIVE MEASURES STUDY

Using the results of the RFI, a corrective measures study (CMS) was performed to evaluate candidate technologies to abate or mitigate the effects of continuing releases from the identified SWMUs. In this evaluation, the CMS assumed the form of a feasibility study performed for sites under the jurisdiction of CERCLA regulations and guidance. Technologies and combinations of technologies were evaluated to form realistic alternatives for corrective measures.

The CMS concentrated on proven, conventional technologies primarily associated with capping, surface water controls, and waste removal. Emerging treatment technologies, while promising, are not sufficiently developed at this time to be considered viable.

A corrective measures program was also projected for two other geographic settings to evaluate the sensitivity of costs to geography and geology. These settings were designated the Glaciated River Valley Setting and the Lakefront Setting. The same plant facilities and SWMUs were superimposed on each setting, to the maximum extent practicable.

COST EVALUATIONS

Based on the scopes of work established, detailed cost evaluations were performed relative to the RFI, CMS, engineering design, implementation, and O&M costs of the recommended corrective measures. The total estimated capital cost for corrective measures at the benchmark setting was $34.5 million. The annual O&M cost was estimated to be about $566,000. The present worth cost of all capital and O&M costs was estimated to be $39.8 million.

The cost analysis showed a total cost of investigation and engineering activities to be approximately $2.49 million or about 6 percent of the total cost for corrective measures at the benchmark setting. The capital costs associated with implementing these measures total approximately $31.9 million or 80 percent of the total cost. The present-worth value of costs for the 30-year operational period constitute a total of approximately $5.3 million or 14 percent of the total cost.

From a review of the components of cost for each setting, it was found that the overall program cost is more sensitive to the number and extent of the SWMUs than to the corrective measure employed. Costs of corrective actions at the individual SWMUs were found to be particularly sensitive to the quantities of materials required to be excavated and removed from the SWMU. These volumes appeared to be the single variable that could most affect the total cost of implementing corrective measures. It was estimated that for SWMUs in which material is identified for excavation and removal, a requirement to remove all material exhibiting contaminant concentrations above background could result in a tenfold increase in the total cost of implementing corrective measures.

LIST OF REFERENCES

1. U.S. Environmental Protection Agency (EPA), September 1986, Draft National RCRA Corrective Action Strategy, Office of Solid Waste and Emergency Response, Washington, DC.
2. U.S. Environmental Protection Agency (EPA), October 1986, Final RCRA Facility Assessment Guidance, Office of Solid Waste, Washington, DC.
3. U.S. Environmental Protection Agency (EPA), October 1986, Draft RCRA Facility Investigation Guidance (Vols. I-III), Office of Solid Waste and Emergency Response, Washington, DC.

REPORT

CONTINUING RELEASES/CORRECTIVE ACTION STUDY: EFFECTS OF PROPOSED REVISIONS IN POINT OF COMPLIANCE

PREPARED FOR

AMERICAN IRON AND STEEL INSTITUTE
WASHINGTON, DC

APRIL 1988

PROJECT NO. 88538

REMCOR, INC.
PITTSBURGH, PENNSYLVANIA

"REALISTIC SOLUTIONS FOR HAZARDOUS WASTE PROBLEMS"

REMCOR

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INTRODUCTION

The American Iron & Steel Institute (AISI) has proposed certain modifications to Section 3004(u) [Corrective Action for Continuing Releases] of the Hazardous and Solid Waste Amendments of 1984 (HSWA) to the Resource Conservation and Recovery Act (RCRA). The proposed revisions to statutory language are outlined in the "AISI Position Paper on RCRA Section 3004(u)." Of particular interest in the present instance is the proposed revision in the point of compliance:

> Section 3004(u) CONTINUING RELEASES AT PERMITTED FACILITIES - Standards promulgated under this section shall require, and a permit issued after the date of enactment of Hazardous and Solid Waste Amendments of 1984 by the Administrator or a State shall require, corrective action for [all] releases of hazardous wastes or constituents from any solid waste management ~~wastes or~~ unit at a treatment, storage, or disposal facility [seeking a] which applies for and is issued a final operating permit under subsections 3005(b) and (c) of this subtitle, regardless of the time waste was placed in such unit. Releases of hazardous constituents which are subject to corrective action under this subsection [i.e., 3004(u)] are those which are responsible for the exceedance of applicable environmental standards at the property boundary. Permits issued under Section 3005 shall contain schedules of compliance for such corrective action (where such corrective action cannot be completed prior to issuance of the permit) and, upon EPA and/or state approval of unit-specific corrective action, assurances of financial responsibility for completing such corrective action.

The AISI has requested that Remcor, Inc. (Remcor) revise our October 1987 estimate of compliance costs at a hypothetical steelmaking facility with the U.S. Environmental Protection Agency (EPA) Continuing Releases/ Corrective Action Program (CR/CAP). This report summarizes implications of the proposed statutory modification and identifies specific solid waste management units (SWMUs) at the hypothetical facility for which costs of compliance would be sensitive to the point of compliance. A revised cost estimate is then presented and discussed.

The most significant revision in scope and cost of corrective measures is anticipated to be associated with increased reliance on ground water interception and treatment at or near the facility boundary, and the elimination of source control. Source control actions may be mandated at a number of facilities by the current legislation. Costs for source control, if incurred at all under AISI's proposed revisions to the legislation, would actually become costs attributable to closure of the facility, rather than to the CR/CAP.

ADVANTAGES AND DISADVANTAGES OF THE REVISED SECTION 3004(u) LANGUAGE

Relocation of the point of compliance from the SWMU boundary to the facility boundary has obvious advantages for individual steelmaking facilities. One of the basic results would be increased flexibility in timing expenditures to address continuing releases. In the following paragraphs, we have defined seven specific areas of increased flexibility or opportunity that may follow from adoption of AISI's proposed revision in Section 3004(u) regarding point compliance. General observations, denoted by an "o" as well as advantages (+) and disadvantages (-) have also been noted for each point. For the most part, this discussion emphasizes the positive results of the proposed revision in point of compliance.

Inherent in the proposed revision is the concept of trading source control in the near term, mandated by regulation, for more long-term management of contaminant migration, i.e., management of risk to public health and/or the environment. Because ground water is the single most prominent medium of contaminant movement at the hypothetical steelmaking facility, corrective measures implemented at points remote from the SWMUs (e.g., at the facility boundary) relate to management of ground water contamination. Both environmental setting and configuration of the facility become much more important factors in evaluating the feasibility and cost of management of migration corrective measures.

Establishing the point of compliance at the facility boundary, rather than at the boundary of the SWMU would:

1. Permit the owner/operator (o/o) to eliminate, or possibly to defer major expenditures associated with source control at individual SWMUs until actual closure of the plant or SWMU

    o The degree to which the o/o may wish to defer or eliminate source control from a cost perspective may be related to the current status of the source (i.e., concentrated or diffuse, long- or short-term) and the potential for the spread of contamination to result in future cleanup costs that would offset any present gains

    o The o/o may elect, apart from strict CR/CAP requirements, to undertake selective source control (e.g., coke by-products area) to address known, quantifiable problems and to avoid more potentially expansive corrective measures that may result from spread of contamination

    + Major investments in corrective measures could be spread over time and paid for by future earnings, rather than creating an unacceptable drain on current assets; the chances of the plant remaining a viable entity would be improved

    - The potential exists for increased costs at closure resulting from spread of contamination within the facility

    - Additional monitoring or operation and maintenance (O&M) costs would accrue over the period of migration control; these costs might not be required if source control were undertaken initially

2. Permit natural processes (dispersion/convection/attenuation/degradation/bioaccumulation) to remain operative

    + Possibility that natural processes may result in attenuation of contaminant levels, or that steady-state conditions may arise that would result in contaminant plumes remaining within the facility boundary

3. Shift the focus of corrective measures from source control to management of migration

   + Permit a single management of migration measure (e.g., ground water interception and treatment near the facility boundary) to address releases from multiple SWMUs, providing more cost-effective control

4. In certain situations, permit active management of migration corrective measures to effect source reduction

   + Active ground water collection and treatment, with possible recirculation, may shorten the lifetime of the source

   + Possible with "minor" modifications of existing wastewater treatment plants to use existing treatment facilities for organic/inorganic removal; with decreased coke and steelmaking capacity many terminal treatment plants are currently underutilized

   - More capital-intensive than monitoring or passive interception

5. Permit use of as yet undeveloped technology for both cleanup and recovery/recycling of present constituents of the SWMUs

   + New technologies for reprocessing of solid wastes in SWMUs (e.g., slag reprocessing) and new uses for such materials may avoid the need for control; in fact, source control may make it more difficult to conduct reprocessing activities

   + Cleanup technologies developed over the next 20 to 30 years may be more cost-effective than traditional engineering approaches (capping/grading, ground water recovery/treatment) suggested in the October 1987 study; it should be emphasized here that benefits from more effective cleanup technologies should be viewed, not in terms of actions mandated by revised Section 3004(u), but in terms of the ultimate closure of the facility

6. Permit continued use of current SWMUs that otherwise might be taken out of service if made the subject of corrective measures

   o The problem at current slag landfills would not be exacerbated by placement of additional slag in the fills

   + Continued use of existing SWMUs would offset immediate costs for construction of new on-site disposal capacity

7. Defer corrective measures until a more stable regulatory environment is achieved

   o Current state of EPA rulemaking under CR/CAP indicates that they do not yet have a workable regulatory program

   + In the near term, regulations should become less of a "moving target," permitting the industry to map out specific corrective measures strategies

   + In the mid term, states will assume primacy, and should be more sensitive to site-specific problems

   + The data base relative to health and environmental effects of hazardous constituents will expand and provide a more realistic basis for defining risks, which, in turn, will drive corrective measures

FACTORS AFFECTING THE FEASIBILITY OF MANAGEMENT OF CONTAMINANT MIGRATION

Remcor believes that establishing the point of compliance at the facility boundary shifts the emphasis of corrective measures from controlling the source to managing migration of contaminants. In our 1987 study, ground water was found to be the principal environmental medium initially affected by continuing releases from SWMUs. Ground water is also the medium of concern relative to inter-media transport, especially regarding migration of the more mobile organic contaminants. With this in mind, management of contaminant migration must focus on either ground water interception and treatment or hydrologic isolation of waste areas.

In evaluating the feasibility of management of migration corrective measures, the hydrogeologic setting becomes a significant, if not the determining, factor.

We have determined that the unglaciated setting is most amenable to management of ground water contamination. Shallow, perched water-bearing zones are common, providing protection for deeper, regional aquifers commonly tapped for domestic and municipal water supply. Bedrock or other lower permeability strata occur relatively near to the surface (i.e., generally less than 30 feet below grade in our typical example), providing a suitable base into which to key barriers to ground water movement (e.g., slurry walls, subsurface drains).

The hydrogeologic setting in glaciated river valleys is typified by the presence of highly productive aquifers within the thick (100 feet or more in our typical example) glacial outwash deposits and alluvial materials along the river. The much greater depth to bedrock and quantities of ground water involved argue against the general application of ground water controls in this setting. Similarly, in the lakefront setting, highly permeable beach sands underlie the steelmaking facility. These sands contain the water table aquifer and are in direct contact with the lake waters. Where the fractured bedrock is incompletely mantled by a low permeability till confining layer, hydrologic isolation of contaminated ground water would not be feasible. Assuming slurry walls could be keyed into the till, evacuation of ground water may create adequate hydrostatic pressure to force ground water into the containment area through bedrock fractures. Without some form of hydrologic isolation, ground water interceptor wells screened in the sands would receive significant recharge from the lake, and could not preferentially evacuate contaminated ground water. Such wells would have an insignificant effect on the water table surface and, consequently, on ground water flow and contaminant movement.

To some degree, the more productive and expansive aquifers present at the glaciated and lakefront settings will offset the inability to control ground water and contaminant movement. Through dilution, the higher volumes and rates of flow will help to mitigate the effects of continuing releases. These mitigating effects should be more pronounced at the facility boundary than at the limits of the SWMU. Credits due the facility through environmental attenuation will be quantified via a Health and Environmental Assessment (HEA), performed in accordance with the most recent draft RCRA RFI Guidance (July 1987). This is not to say that the EPA will entirely defer corrective measures where the HEA indicates acceptable present risks due to continuing releases. The RFI HEA guidance indicates that the EPA considers itself vested with broad authority to interpret the results of the HEA and to establish cleanup objectives. However, it appears that the HEA may provide a site-specific basis upon which the facility may argue for replacement of source control with management of migration (where feasible), or for more liberal cleanup requirements consistent with protection of public health and the environment at the point(s) of exposure.

EVALUATION OF THE EFFECT OF PROPOSED LEGISLATIVE REVISIONS ON CR/CAP COST OF COMPLIANCE

With the foregoing as a basis, significant reduction in cost of compliance with the CR/CAP may generally be anticipated at facilities within the unglaciated setting under the revised Section 3004(u) language. The degree to which cost reductions may be achieved at facilities in the glaciated and lakefront settings will be determined on a more site-specific basis. Such determinations will be a function of the results of the HEA and interpretation by the regulatory authority.

In addition, we had indicated in the 1987 study that the estimated cost of compliance may increase by an order of magnitude at any facility if the regulatory authority adopts a very conservative interpretation of cleanup requirements under the CR/CAP. Relocation of the point of compliance to the facility boundary should permit the regulatory authority greater flexibility in defining cleanup requirements consistent with the HEA. Although we cannot quantify this cost reduction in a general sense, significant savings may be realized in all settings. This flexibility should be most apparent at the glaciated and lakefront settings, where the higher volume of ground water and surface water may be relied upon to provide greater dilution of contaminant loadings.

Based on the RFI guidance, Remcor has anticipated that there will be no significant revision in the cost of performing the RFI under the proposed revisions to Section 3004(u). We assume that the facility will need to inventory all SWMUs and to conduct investigations specific to individual SWMUs to develop evidence of continuing release. Cost savings associated with a lessened emphasis on quantification of source areas and tracking contaminant plumes across the facility in the RFI will be offset by the added cost of establishing adequate monitoring points at the facility boundary. Such points will be necessary to determine levels of contamination in ground water or surface water at the new point of compliance, as well as to monitor compliance over the life of the facility. In some cases, the overall cost of investigations may actually increase somewhat due to the greater area to be evaluated. In view of this, and our finding in the 1987 study that the cost of the RFI and the Corrective Measures Study (CMS) were less significant than the cost of implementing corrective measures, we have elected in this report to generally equate the cost of compliance with that of corrective measure implementation.

With respect to minor SWMUs and other comparatively isolated source areas, we have anticipated that continuing releases will be addressed in a number of ways apart from the CR/CAP. Contaminated soils associated with transfer stations will represent localized sources that need not be addressed via source control under the CR/CAP, so long as effects of the release are not manifested at the facility boundary at levels of concern. The facility o/o may elect to undertake selected source control where this would be cost effective, or would reduce the spread of contamination and enhance the effectiveness of management of migration measures. This would not, however, be mandated by the CR/CAP. Specific examples include the coal tar decanter sludge lagoon and biobasin in the coke plant, and various areas of contaminated soils associated with spillage at transfer stations or storage tanks. Any above ground tanks found to be leaking would be addressed under existing Spill Prevention, Control, and Countermeasure Plans (SPCCs) or contingency plans developed pursuant to RCRA for tanks handling hazardous wastes (including 90-day accumulation tanks not strictly permitted as RCRA units). Leaking underground storage tanks (LUST) would be addressed under the LUST regulations.

The remainder of this memorandum details quantifiable revisions in the cost of compliance with the CR/CAP at the unglaciated Major River valley setting. Although generally positive results would be expected from a similar analysis at the other settings, as noted above, cost reductions would be less significant, and more affected by site-specific hydrogeologic conditions and regulatory interpretation.

Figure 1 is a plan view of the hypothetical steelmaking facility in the unglaciated Major River valley setting. This figure identifies the major SWMUs at the site. Table 1 presents the revised estimate of the CR/CAP cost of compliance at this setting. This table is a revision of Table 7-13 from the 1987 study. Capital costs, present worth of O&M costs, and net present worth costs are presented in Table 2 as a comparison between the two scenarios (i.e., point of compliance at the SWMU boundary versus the facility boundary).

Table 3 presents a comparison of corrective measures proposed under both scenarios. Modifications in these corrective measures are reflected in the cost differentials shown in Table 2 and discussed in the following text.

Management of migration measures at the unglaciated setting would generally be less capital intensive than those previously proposed with emphasis on control at the SWMU boundary (i.e., source control). O&M costs, as a percentage of total capital costs, are higher than those associated with source control measures; however, the overall O&M costs for the facility are lower under the current revision.

Corrective measures previously identified for the coke by-products area included both source control and management of migration. Coal tar and biosludge were to be excavated and removed from their respective impoundments. Selected areas of the by-products area were to be graded and capped. Migration of contaminants was to be managed by construction of a ground water cutoff trench and slurry wall. With strict adherence to the management of migration approach, the only corrective measure mandated by the CR/CAP would be installation of a ground water collection and pumping system, with treatment prior to discharge. Treatment would be achieved, as before, by routing the collected ground water to the nearby biological treatment plant. Significant costs associated with implementation of source control would be eliminated, or, at least, left to the discretion of the facility o/o.

Source control measures previously identified for the Combined Landfill-West included selective waste excavation and removal, grading, capping, and runon and runoff control measures. The CAP also included ground water interception and treatment, and provision of an alternative drinking water supply for affected residences as an interim corrective measure. This landfill is an excellent example of a non-contiguous facility. At such facilities, the SWMU boundary and the facility boundary essentially coincide. In the 1987 study, Remcor suggested removal of source areas (i.e., coal tar decanter sludge and spent degreasing sludge disposal areas) in conjunction with ground water collection and treatment. The intent of this program was to address the sources of contamination within the SWMU, as near to the source areas as possible. In effect, the two source areas were "SWMUs" within the facility identified as the

Combined Landfill-West. In the present instance, we believe that source control is at the discretion of the o/o of the facility, and have elected to delete source control from the CAP for the Combined Landfill-West.

The Combined Landfill-East represents a much different situation from that at the Combined Landfill-West. Dusts from the electric arc furnaces (EAFs) and metal plating wastes had typically been disposed at random within the fill, so that specific source areas were not identifiable. Hazardous constituents are inorganic in nature, and not as mobile in ground water. In addition, the Combined Landfill-East is insulated from the nearest receptor (i.e., Major River) by the facility, itself. With the point of compliance at the boundary of the SWMU, source control measures such as grading, capping, and surface water controls were required to prevent migration of contaminants beyond the SWMU boundary. Relocating the point of compliance to the facility boundary at the Major River permits the CAP to be reduced to surface water controls to reduce migration of waste materials via surface runoff. Downgradient monitoring/ground water interceptor wells would be installed to contain any ground water contamination from this and other SWMUs on the eastern side of the river. The required treatment would again be achieved via the existing terminal treatment plant. The capital cost of this approach would be significantly less than the cost of capping the entire landfill. Annual O&M costs would remain approximately the same.

Relocation of the point of compliance to the facility boundary would generally obviate the need for source control (excavation and removal of contaminated soils) at minor SWMUs, such as transfer stations and storage tanks. The actual savings in capital expenditure and O&M costs is a function of the number of such SWMUs at each facility that would have required corrective measures under the current regulatory language.

CLOSING

We trust that this submittal addresses technical issues and costs of compliance with the proposed revision in Section 3004(u). Please feel free to contact us if you require any additional information in this specific regard. Remcor appreciates the opportunity to assist AISI in dealing with issues such as these that are critical to the iron and steelmaking industry.

Respectfully submitted,

John A. George

John A. George
Manager, Geosciences Group

W E Rosenba

William E. Rosenbaum
Project Manager

JAG:WER:rmv
Attachments

TABLE 1 (REVISION OF TABLE 7-13, 3/28/88)
CORRECTIVE MEASURES REVISED COST SUMMARY
UNGLACIATED MAJOR RIVER VALLEY SETTING
CONTINUING RELEASES CORRECTIVE ACTION STUDY
AMERICAN IRON AND STEEL INSTITUTE

SOLID WASTE MANAGEMENT UNIT	CR/CAP PHASE							
	RFI	CMS	DESIGN	IMPLEMEN-TATION	CAPITAL COST SUBTOTAL	ANNUAL O&M (current dollars)	O & M (present worth)	TOTAL PRESENT WORTH COST
COKE BYPRODUCTS AREA	$181,700	$58,100	$106,300	$208,000	$554,100	$23,000	$195,800	$749,900
COMBINED LANDFILL - WEST	$379,900	$113,500	$207,600	$1,500,000	$2,201,000	$241,800	$2,279,300	$4,480,300
COMBINED LANDFILL - EAST	$139,000	$50,200	$80,000	$235,800	$505,000	$131,100	$1,235,900	$1,740,900
Groundwater Collection (1)				$208,000	$208,000	$23,000	$195,800	$403,800
OTHER SWMU´s								
Terminal treatment plant	$34,200	$2,000	$3,600	$76,600	$116,400			$116,400
Underground storage tanks(10/10)(2)	$136,300	$7,900			$144,200			$144,200
Above ground storage tanks(10/10)	$372,100	$21,700			$393,800			$393,800
Transfer stations(10/10)	$435,800	$25,400			$461,200			$461,200
SUBTOTAL	$978,400	$57,000	$3,600	$76,600	$1,115,600			$1,115,600
OTHER SWMU´s	$19,600				$19,600			$19,600
TOTALS	$1,698,600	$278,800	$397,500	$2,228,400	$4,603,300	$418,900	$3,906,800	$8,510,100

(1) It has been assumed that treatment of the groundwater which is recovered will be done at the existing plant for a period of 20 years.
(2) The numbers in parentheses refer to the number of SWMU's of the given type which shall be evaluated, above the slash, and the number requiring corrective measures under the revised CR/CAP compliance location, below the slash.

TABLE 2
CORRECTIVE MEASURES COST SUMMARY COMPARISONS
UNGLACIATED MAJOR RIVER VALLEY SETTING
CONTINUING RELEASES CORRECTIVE ACTION STUDY
AMERICAN IRON AND STEEL INSTITUTE

	Cost Estimate Point of Compliance at SWMU Boundary			Cost Estimate Point of Compliance at Property Boundary		
SOLID WASTE MANAGEMENT UNIT	CAPITAL COST SUBTOTAL	O & M (present worth)	TOTAL PRESENT WORTH COST	CAPITAL COST SUBTOTAL	O & M (present worth)	TOTAL PRESENT WORTH COST
COKE BYPRODUCTS AREA	$5,099,800	$1,515,000	$6,614,800	$554,100	$195,800	$749,900
COMBINED LANDFILL - WEST	$12,148,700	$2,279,300	$14,428,000	$2,201,000	$2,279,300	$4,480,300
COMBINED LANDFILL - EAST	$14,769,000	$1,539,400	$16,308,400	$505,000	$1,235,900	$1,740,900
Groundwater Collection				$208,000	$195,800	$403,800
OTHER SWMU's						
Terminal treatment plant	$252,500		$252,500	$116,400		$116,400
Underground storage tanks(10/10)(2)	$481,000		$481,000	$144,200		$144,200
Above ground storage tanks(10/10)	$625,700		$625,700	$393,800		$393,800
Transfer stations(10/10)	$1,088,600		$1,088,600	$461,200		$461,200
SUBTOTAL	$2,447,800		$2,447,800	$1,115,600		$1,115,600
OTHER SWMU's	$19,600		$19,600	$19,600		$19,600
TOTALS	$34,484,900	$5,333,700	$39,818,600	$4,603,300	$3,906,800	$8,510,100

TABLE 3

REVISIONS IN PROPOSED CORRECTIVE ACTION PLANS
UNGLACIATED MAJOR RIVER VALLEY SETTING
SUPPLEMENT TO CONTINUING RELEASES/CORRECTIVE ACTION STUDY
AMERICAN IRON & STEEL INSTITUTE

POINT OF COMPLIANCE AT SWMU BOUNDARY	POINT OF COMPLIANCE AT FACILITY BOUNDARY (Corrective Measure Required)
COKE BY-PRODUCTS AREA:	
Removal and off-site disposal of coal tar decanter sludge and biosludge lagoons	NO
Capping of affected areas	NO
Ground water collection via collection trench and slurry wall	YES
Surface water diversion	YES
Demolition and removal of 50,000-gallon storage tank with excavation and removal of contaminated soils	NO
Removal of free-floating organics from ground water surface	YES
COMBINED LANDFILL-WEST:	
Removal and off-site disposal of remnants from degreaser sludge drum disposal area	NO
Partial (accessible) removal of coal tar decanter sludge/coke by-products materials	NO
Capping of waste removal areas	NO
Surface water diversion	YES
Ground water recovery and treatment	YES
Provision of alternative drinking water supply for affected residents	YES

TABLE 3
(Continued)

POINT OF COMPLIANCE AT SWMU BOUNDARY	POINT OF COMPLIANCE AT FACILITY BOUNDARY (Corrective Measure Required)
COMBINED LANDFILL-EAST:	
Regrading and capping of entire landfill	NO
Surface water diversions	YES
MINOR SWMUs:	
Localized contaminated soil removal	NO
Repaving or capping of waste removal areas	NO

WRITTEN TESTIMONY

FOR SUBMISSION BY KEN ALKEMA

DIRECTOR, DIVISION OF ENVIRONMENTAL HEALTH - STATE OF UTAH

TO THE

SENATE SUBCOMMITTEE ON HAZARDOUS WASTES AND TOXIC SUBSTANCES

SEPTEMBER 22, 1988

Mr. Chairman, members of the Subcommittee, thank you for the opportunity to testify on S. 2773, the Waste Minimization and Control Act of 1988. This legislation will further the objectives of the Solid Waste Disposal Act to control solid waste disposal and to promote recycling and waste reduction.

Congress must take a leadership role in setting policies for the recycling, packaging and waste minimization, as well as in setting guidelines for municipal wastes, infectious wastes, mining wastes, and other solid wastes. The states, on the other hand, must take the leadership role in actual management of solid wastes, including permitting and enforcement.

Today, I would like to address several specific components of the proposed legislation.

Mine Wastes

The first is mine waste. Mining is of significant concern to the West because of its importance to the economy, as well as its potential for environmental impacts. Western governors have decided to tackle the issue of mine waste regulations and have appointed the governor of Utah, Governor Norman H. Bangerter, to spearhead their efforts. Governor Bangerter has asked me to chair the Western Governors' Association (WGA) Mine Waste Task Force, and it is in that capacity that I address you.

Mine waste is a serious issue. As you know, the sheer waste volumes are staggering. Between 1910 and 1981, nearly 50 billion metric tons of waste were generated in the U.S. by the mining and beneficiation of eight metals and two nonmetals. Approximately 85% of that waste was produced by copper, iron ore and phosphate operations. Displacing such tremendous quantities of overburden and other waste can obviously affect the surrounding environment.

Even more importantly, such wastes can be potentially dangerous to the health of humans, wildlife and the environment. Without adequate controls, the waste streams from some mining operations can leak harmful concentrations of metals, radionuclides, acids, cyanide and other substances into the environment, and ultimately into the water we drink and the air we breath.

It is important to clarify that not all mining operations create wastes that are inherently dangerous. The magnitude of the potential danger varies according to several factors; what is being mined, how it is further refined, and site-specific geology, hydrology, and climate.

Under the aegis of the Western Governors' Association, 21 states with significant mining operations throughout the nation are working together to pool their resources in addressing this issue. With funding from EPA, we are working to develop a model regulatory framework for mine waste - one that outlines the key components, criteria and mechanisms for managing mine wastes and that allows considerable discretion to the states to determine what specific details meet the site-specific situations in a state. We are also completing a comprehensive survey of state mine waste management that will clearly define what the states are doing. We are also working to provide consensus comments to EPA as it develops national regulations. Throughout the process we are maintaining communications with environmental and other public interest groups, as well as private industry.

It has been five months since the WGA Mine Waste Task Force met at the end of April; and although we still have much to accomplish, we have established some basic parameters which we believe a national regulatory program should include. These are:

- insure protection of public health and the environment,
- provide the flexibility that is necessary for a national program to allow for site-specific and waste-specific management objectives,
- avoid duplication of existing federal or state programs; and
- utilize the existing and successful state programs governing the disposal of mine waste.

It is clear from EPA's own determination that additional authority, such as that provided by S. 2773, will be required to adequately regulate mine waste under Subtitle D of the Resource Conservation and Recovery Act.

I want to put additional emphasis on the necessity to avoid overlap and duplication of existing state and federal programs. Not only is duplication costly, but it dilutes our efforts to protect public health and the environment, wasting limited resources. It is also likely to result in another layer of bureaucracy that will not necessarily improve efficiency or result in improvements to the mine waste situation.

The key, of course, lies in determining how well existing programs are working. Participants in the WGA Mine Waste Task Force agree that there are gaps in the current state and federal regulatory structure. Federal law should require the gaps to be filled and allow the states time to implement them before requiring a federal agency to step in and take over.

The WGA Mine Waste Task Force has made considerable gains in successfully identifying and consolidating the various concerns of 21 states in the regulation of mine wastes. We are confident that we will make even more progress during the next few months and will be able to provide you with important information on existing programs and more fully developed state consensus positions on the proposed legislation.

I am also including, for the record, a copy of a recent letter to EPA Assistant Administrator, J. Winston Porter, that more fully describes states' concerns with the development of federal regulations for mine waste.

State Certification

The second issue is state certification and the provisions for such in S. 2773. We strongly support the concept of states certifying that they have authority to issue permits. This process will simplify state participation. After certifying, states would be able to issue permits as required by S. 2773, unless EPA took action to deny the certification. This is a novel concept, but one that is justified by the nature of solid waste management. One year is inadequate, however, to insure that states can pass appropriate legislation, develop resources, and promulgate a regulatory framework in order to certify.

Existing Solid Waste Management Units

The third issue is existing solid waste management units. It will be necessary to provide for iterim status at existing solid waste management units if all facilities must receive permits within one year. However, interim status should be limited to those solid waste management facilities which do not treat, store, or dispose of hazardous waste. While it appears that the proposed law provides for some type of interim status if "no release of hazardous materials" is occurring, it is unclear what the release of a hazardous substance means. Almost all solid waste facilities release small quantities of substances that may be labeled hazardous.

Guidelines

The fourth issue is guidelines. It is our understanding that the guidelines would provide minimum standards or guidelines that states would have to utilize in their solid waste management program. In the management of solid waste, there may be several techniques, or engineering solutions that will achieve the same level of protection of public health and environment. It is critical that the guidelines provide adequate flexibility to allow states to choose which alternatives best fit their situation, while at the same time achieving protection of public health and the environment.

Funding

The final, and possibly the most important issue, is funding. S. 2773 authorizes funding for states to manage solid waste. However, states can no longer carry out congressional mandates without adequate funding to support such activities. Congress must provide sufficient resources where a federal program is mandated to the states, by appropriating the funds required to carry out those programs.

I heartily encourage you to incorporate the WGA's basic parameters and our general comments, and to provide states with the financial wherewithal to establish these programs. Thank you again for the opportunity of providing comments on S. 2773.

FILE COPY

DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH

Norman H. Bangerter
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September 22, 1988

J. Winston Porter
Assistant Administrator - U.S. EPA
Office of Solid Waste
Environmental Protection Agency
Room 360
401 M Street SW
Washington, DC 20460

Dear Dr. Porter:

The Western Governors' Association (WGA) has endorsed the Environmental Protection Agency's (EPA) effort to propose and promulgate a regulatory program for mine waste under Subtitle D of the Resource Conservation and Recovery Act. Further, the WGA policy statement emphasized that, "The regulatory program should establish a state based approach for protection of public health and the environment, taking into account site specific, waste specific and waste management practices that are in use. To the maximum extent feasible, consistent with this objective, the EPA program should allow reliance on existing state regulatory programs for mining waste." The National Governors' Association has also adopted a similar policy statement.

As you are aware, EPA has granted funds to WGA to coordinate the efforts of twenty-one states that would be directly impacted by federal regulations to develop this information on existing state programs. It is the opinion of the states participating in the WGA effort that the strawman regulations released by EPA on May 31 have failed to meet the clear intent of the WGA policy statement. Although the states have agreed to provide comments to EPA regarding the strawman rules, this effort is not to be construed as an endorsement of the strawman rules or of the process which produced the strawman released on May 31, 1988. The principal objections to the strawman are:

1. It does not embrace a concept of state primacy and the state-based approach contemplated in the WGA policy statement;
2. It does not provide the flexibility that is necessary for a national program to allow for site-specific and waste-specific management objectives;
3. It is not cost effective, nor does it consider or address the administrative costs of EPA and state implementation; and
4. It does not reflect or acknowledge the existence of successful state and federal programs governing the disposal of mine waste. EPA should review the applicability of existing federal programs - Clean Air Act, Clean Water Act, etc. - to mining activities in order to identify the environmental public health problems that currently are not subject to regulation.

The principal objection to the process is that it was accelerated to the detriment of developing a viable program with respect to these concerns. Simply stated, it appears that EPA put the cart before the horse in the process of developing the first version of the strawman. EPA's current process to obtain information from and to allow adequate time to work with the states is encouraged.

The states represented on the WGA Mine Waste Task Force want to continue to work with EPA in the development of the Subtitle D program for mine waste that is consistent with the WGA policy statement. We believe that the policy statement is consistent with the goal set by Congress and supported by interested groups. As such, we recommend the following steps.

First, before EPA proceeds further it must obtain complete and accurate information regarding existing state programs. EPA must give substantial consideration in the development of a national mine waste program to the existing state and federal programs that regulate mine waste. To date the EPA has not completed the evaluation of existing state programs to determine whether, or to what degree, there is a deficiency with respect to the regulation of mine waste. Early drafts of the evaluations that have been reviewed by states have been very inaccurate. The WGA Task Force members are currently responding to a survey which will provide an accurate profile of the regulation of mine waste within the twenty-one states that will be primarily affected by the proposed regulations. Due to the absence of this information, the current EPA strawman regulation effort is premature and reflects a fundamental lack of understanding of the current regulation of mine waste under state programs. Without completion of this step, the federal program risks undercutting existing state programs, being duplicative of those programs and not being cost effective.

Second, we recommend that EPA employ much greater flexibility than is evident in the strawman to develop an effective state-based, site-specific and waste-specific regulatory program under Subtitle D of RCRA. Currently, the strawman imposes a hazardous and solid waste management perspective and framework to regulate mine waste where existing mining and reclamation regulatory frameworks currently used by many states could be more effective. As such, a national program should be developed using the successful components of existing programs to meet a prescriptive federal program where existing state programs and other federal programs are adequately protecting the human health and the environment.

Third, we recommend that EPA not develop a second version of the strawman until both the EPA and the WGA have completed their studies on existing programs, the results of which should be evident in the final version of a Subtitle D program. The schedule proposed by the WGA under its grant agreement with EPA is a reasonable schedule for accomplishment of this task.

Please accept this critique in the constructive manner in which it is intended and understand that the WGA Task Force will continue to work with EPA to develop an appropriate mine waste program.

Sincerely,

Kenneth L. Alkema

Kenneth L. Alkema, Chairman
WGA Mine Waste Task Force

KLA:jgh

TESTIMONY TO UNITED STATES SENATE
SUBCOMMITTEE ON HAZARDOUS WASTES AND TOXIC SUBSTANCES

SEPTEMBER 20, 1988

BY
GARY BRIAN LISS
SOLID WASTE PROGRAM MANAGER
CITY OF SAN JOSE, CALIFORNIA
408-277-4509

THANK YOU FOR THE INVITATION TO TESTIFY AT YOUR HEARING ON THE WASTE MINIMIZATION AND CONTROL ACT OF 1988 (S2773). I WAS PARTICULARLY PLEASED TO SEE THAT S2773 REFLECTS MANY OF THE CONCERNS AND SUGGESTIONS THAT WE OFFERED TO YOU IN OUR TESTIMONY LAST YEAR REGARDING THIS IMPORTANT ISSUE. OVERALL, IT REPRESENTS THE TYPE OF PROGRESSIVE LEGISLATIVE WHICH THIS SUBJECT DESPERATELY NEEDS, AND BEGINS TO ESTABLISH A CLEAR NATIONAL RECYCLING POLICY. THE PROVISIONS WHICH ARE OF GREATEST APPLICABILITY AND SIGNIFICANCE TO SAN JOSE ARE (IN ORDER OF PRIORITY):

- NATIONAL RECYCLING GOALS OF 25% WITHIN 4 YEARS
- FEDERAL PROCUREMENT PRICE PREFERENCE
- EPA OFFICE OF WASTE REDUCTION AND RECYCLING
- GRANTS TO STATES FOR TECHNICAL ASSISTANCE
- WASTE REDUCTION AND RECYCLING CLEARINGHOUSE
- COMPREHENSIVE STATE PLANNING WITH FEDERAL FUNDING
- HIERARCHY OF WASTE PREVENTION AND MANAGEMENT (REDUCE, RECYCLE, RECOVER, TREAT AND DISPOSE)
- STRICT SOLID WASTE GUIDELINES FOR LANDFILLS AND WASTE-TO-ENERGY ASH AND EMISSIONS
- STRONG PENALTIES FOR NONCOMPLIANCE
- NATIONAL STANDARDS FOR INDUSTRIES TO REDUCE WASTES
- NATIONAL PACKAGING INSTITUTE

I WOULD LIKE TO RESPOND TO THE REQUESTS THAT YOU MADE IN YOUR INVITATION LETTER BASED PARTICULARLY ON OUR INSIGHTS AS A MAJOR CITY WHICH IS CURRENTLY AGGRESSIVELY PURSUING AN INTEGRATED WASTE MANAGEMENT STRATEGY. OUR COMMENTS WILL FOCUS HEAVILY ON THE RECYCLING PROVISIONS OF THE LEGISLATION, AS THAT IS AN AREA OF PARTICULAR EXPERTISE.

FINANCING MECHANISM

GENERALLY THE CITY OF SAN JOSE FAVORS FINANCING MECHANISMS THAT DIRECTLY SUPPORT THE LEVEL OF GOVERNMENT LEVYING THE TAX OR INSTITUTING A FEE MECHANISM. FUNDING FOR LOCAL GOVERNMENTS TO PERFORM THEIR RESPONSIBILITIES IN SOLID WASTE MANAGEMENT SHOULD BE LEVIED AT THE LOCAL LEVEL.

LOCAL GOVERNMENTS SHOULD NOT HAVE TO APPLY TO THE STATE OR FEDERAL GOVERNMENT FOR GRANTS OR LOANS TO ACCOMPLISH THEIR BASIC RESPONSIBILITIES. STATE ENABLING LEGISLATION FOR LOCAL GOVERNMENT IS NEEDED, HOWEVER, IN MANY ASPECTS OF SOLID WASTE MANAGEMENT AND RECYCLING TO PROVIDE GREATER FLEXIBILITY TO LOCAL GOVERNMENTS TO REVISE EXISTING OR ADOPT NEW FINANCING MECHANISMS, GIVEN CONSTRAINTS ADOPTED OVER THE PAST DECADE.

IN CALIFORNIA, COUNTY SOLID WASTE PLANNING AND LOCAL SOLID WASTE ENFORCEMENT ACTIVITIES ARE TWO GOOD EXAMPLES WHERE THE STATE HAS PROVIDED CLEAR ENABLING LEGISLATION FOR CITIES AND COUNTIES TO LEVY FEES ON WASTES DISPOSED OF IN LANDFILLS IN THEIR JURISDICTIONS. THESE FEES ARE DEDICATED TO THE PURPOSES ESTABLISHED IN THE ENABLING LEGISLATION. IN SAN JOSE THE SOLID WASTE ENFORCEMENT FEE IS CURRENTLY 9¢ FOR EACH CUBIC YARD OF

WASTE BURIED IN THE LANDFILLS IN SAN JOSE. IN SANTA CLARA COUNTY, THE COUNTY SOLID WASTE PLANNING FEE IS CURRENTLY 7¢ FOR EACH TON OF WASTE DEPOSITED IN LANDFILLS IN THE COUNTY.

STATE PLANS REQUIRED IN S2773 COULD BE REQUIRED TO IDENTIFY THE FINANCING MECHANISMS AVAILABLE TO LOCAL GOVERNMENTS TO IMPLEMENT THE PROVISIONS OF THE STATE PLAN.

ALTHOUGH FUNDS FOR STATE PLANS PROPOSED FROM THE FEDERAL GOVERNMENT DIVERGES FROM THE GENERAL PHILOSOPHY EXPRESSED ABOVE, IN THE PAST THIS APPROACH HAS SHOWN TO BE EFFECTIVE TO STIMULATE MORE UNIFORM PLANNING NATIONALLY THAN PLANNING LEFT SOLELY TO STATE INITIATIVES. IN CALIFORNIA, THE FEDERAL FUNDING MIGHT ALSO PROVIDE GREATER IMPETUS FOR THE STATE GOVERNMENT TO COORDINATE ITS SOLID WASTE ACTIVITIES. CURRENTLY, THE MAJOR ASPECTS OF SOLID WASTE MANAGEMENT ARE REGULATED BY A HOST OF AGENCIES, INCLUDING: CALIFORNIA WASTE MANAGEMENT BOARD, STATE WATER RESOURCES CONTROL BOARD, STATE AIR RESOURCES BOARD, CALIFORNIA ENERGY COMMISSION, DEPARTMENT OF HEALTH SERVICES, DEPARTMENT OF CONSERVATION, REGIONAL AIR AND WATER BOARDS, COUNTY PLANNING DEPARTMENTS AND LOCAL ENFORCEMENT AGENCIES.

THE PROPOSED WASTE DISPOSAL ASSISTANCE TRUST FUND IN S2774 FUNDED BY FEES ON VIRGIN MATERIALS IS A GOOD MECHANISM TO FUND THE NEEDED INITIATIVES. SUCH A FEE WILL HAVE THE DUAL PURPOSE OF COMMUNICATING TO MANUFACTURERS THE IMPORTANCE OF DESIGNING FOR RECYCLABILITY AND USING FEWER RESOURCES AT THE SAME TIME AS GENERATING SIGNIFICANT REVENUES.

EQUALLY ATTRACTIVE REVENUE SOURCES BEING USED WIDELY AT

THE LOCAL LEVEL ARE FEES ON DISPOSAL OF SOLID WASTES IN LANDFILLS (AS NOTED ABOVE). IN SAN JOSE, LAST YEAR WE REVISED OUR BUSINESS TAX TO BE ON THE BASIS OF $2 FOR EACH CUBIC YARD OF WASTE BURIED. BY MEASURING THE FEE AFTER COMPACTION AND RECYCLING ON SITE, WE PROVIDED THE OPERATORS WITH A SIGNIFICANT INCENTIVE TO RECYCLE AND SAVE LANDFILL SPACE THROUGH IMPROVED MANAGEMENT, AT THE SAME TIME AS GENERATING REVENUE FOR THE CITY.

ALTHOUGH THE FEDERAL GOVERNMENT COULD ENACT A DISPOSAL SURCHARGE ON ALL LANDFILLS PERMITTED IN THE U.S., THE FEE ON PACKAGING IS MORE APPROPRIATE BECAUSE THAT IS A FINANCING MECHANISM NOT AVAILABLE AT ALL TO LOCAL GOVERNMENTS. RATHER THAN COMPETING OR DUPLICATING FINANCING MECHANISMS, IT WOULD BE FAR PREFERABLE FOR THE FEDERAL GOVERNMENT TO SEEK FUNDING FROM SOURCES NOT POSSIBLE FOR LOCAL GOVERNMENTS TO PURSUE.

IN ADDITION, IT IS THE PACKAGING INDUSTRY WHICH IS CONTRIBUTING MOST SIGNIFICANTLY TO THE BOURGEONING QUANTITY OF WASTES IN THIS COUNTRY. IN ORDER TO ENCOURAGE MORE DESIGNING FOR RECYCLABILITY OF PRODUCTS, INCENTIVES COULD BE INCLUDED IN THE PROPOSED MECHANISM OF S2774. MANUFACTURERS COULD BE PROVIDED CREDITS AGAINST THEIR TAX LIABILITY UNDER THIS PROPOSAL FOR ALL THE RECYCLED MATERIALS WHICH THEY PURCHASE TO MANUFACTURE THEIR PRODUCTS. THE $7 PER TON COULD BE INCREASED TO $8 PER TON TO ASSURE SUFFICIENT REVENUES WERE GENERATED AT THE SAME TIME CREDITS WERE MADE AVAILABLE IN THIS WAY.

REGULATORY ALTERNATIVES

THE STATE PLANS SHOULD BE REQUIRED TO LINK LOCAL PLANNING DIRECTLY TO SOLID WASTE FACILITY PERMITTING PROCEDURES. AS PROPOSED IN THE STATE RECYCLING POLICY ADOPTED BY THE CALIFORNIA RESOURCE RECOVERY ASSOCIATION THIS YEAR (WHICH SAN JOSE AND OTHER LOCAL GOVERNMENTS AND INDUSTRY ADOPTED AS LEGISLATIVE POLICY GUIDELINES FOR RECYCLING LEGISLATION):

> "THE KEY TOOLS THAT CAN BE USED TO SHIFT THE SOLID WASTE SYSTEM...FROM A ONE-WAY DISPOSAL ORIENTATION TO A RECYCLING-ORIENTED SYSTEM...ARE THE SOLID WASTE FACILITY PERMITS AND COUNTY SOLID WASTE MANAGEMENT PLANNING PROCESS. THESE STATE SUPERVISED SYSTEMS WILL ALSO BE ABLE TO INFLUENCE LOCAL GOVERNMENTS TO CHANGE THEIR CONTRACTS, RATE STRUCTURES AND ORDINANCES TO MEET THE GOALS AND POLICIES ESTABISHED IN PLANS AND PERMITS."

IN CALIFORNIA, SOLID WASTE FACILITY PERMITS FOR NEW OR EXPANDING FACILITIES CANNOT BE ISSUED UNTIL THEY ARE FOUND IN CONFORMANCE WITH COUNTY SOLID WASTE PLANS. IF PLANS REQUIRED LOCAL GOVERNMENTS AND INDUSTRY TO MEET RECYCLING GOALS, THEN FACILITY PERMITS WOULD BE CONDITIONED UPON THE SUCCESSFUL DEVELOPMENT OF SUCH PROGRAMS.

SAN JOSE HAS BEEN PARTICULARLY ACTIVE IN SUPPORTING THIS CONCEPT AS IT CONTAINS 80% OF THE LANDFILL CAPACITY WITHIN THE COUNTY. WE ARE ANXIOUS TO SAVE THAT LANDFILL CAPACITY FOR AS LONG AS POSSIBLE BY RECYCLING AS MUCH AS WE CAN. TO THIS END WE URGE THOSE THAT USE PRIVATE FACILITIES IN SAN JOSE TO RECYCLE AT LEAST AS MUCH AS WE DO. SUPPORT FROM THE STATE AND FEDERAL GOVERNMENT REQUIRING OTHER COMMUNITIES TO RECYCLE 25% OF THEIR WASTES HELPS SAN JOSE EXTEND THE USEFUL LIFE OF OUR VALUABLE LANDFILLS.

SECTIONS 202(h) AND 203(d)(3) EMBODY THIS CONCEPT RELATIVE TO ASSURING THAT STATE PLANS WILL BE SUBMITTED. THIS SAME CONCEPT SHOULD BE APPLIED TO INTEGRATING LOCAL PLANNING AND PERMITTING ACTIVITIES. THE INTEGRATED WASTE MANAGEMENT STRATEGY OUTLINED IN SECTION 102(e) SHOULD BE EXPANDED UPON IN THE REQUIREMENTS FOR STATE PLANS. THE CRITICAL ELEMENT IN CHANGING TO AN INTEGRATED WASTE MANAGEMENT STRATEGY FROM TODAY'S PRACTICES IS A DETAILED EVALUATION OF HOW RECYCLING CAN BE INCORPORATED INTO COLLECTION AND DISPOSAL CONTRACTS, PERMITS, RATE STRUCTURES, ORDINANCES AND ALL ASPECTS OF THE MYRIAD OF RULES AND REGULATIONS WHICH DEFINE THE SOLID WASTE SYSTEM TODAY. THIS CAN BEST BE DONE AT THE LOCAL LEVEL, AS EACH CITY'S SOLID WASTE COLLECTION AND DISPOSAL SYSTEM IS DESIGNED UNIQUELY.

ENFORCEMENT MECHANISMS

THE 25% RECYCLING GOAL MUST BE DEFINED IN THE LEGISLATION IN SUCH A WAY THAT IT CAN BE ENFORCED FOR IT TO HAVE MEANING. IN OUR COUNTY, WE ARE WRESTLING WITH THAT ISSUE BASED ON A GOAL ADOPTED THIS YEAR TO RECYCLE 25% OF OUR WASTE STREAM, COUNTY-WIDE, BY 1995. CONCERNS WHICH HAVE BEEN RAISED INCLUDE:

- WHAT IS THE BASE YEAR AGAINST WHICH THE GOAL WILL BE MEASURED?
- ARE EXISTING RECYCLING PROGRAMS (PUBLIC, PRIVATE, CHARITABLE, ETC.) TO BE INCLUDED IN CALCULATIONS AND GIVEN CREDIT FOR THEIR FORESIGHT AND LEADERSHIP?
- SHOULD THE 25% RECYCLING GOAL BE REPHRASED AS A "WASTE REDUCTION" GOAL, TO ACCOUNT FOR SOURCE REDUCTION AND REUSE AS WELL?
- WHAT DATA IS AVAILABLE TO MEASURE THE AMOUNT OF MATERIALS RECYCLED IN A GIVEN CITY, GIVEN

RECYCLING'S INTERNATIONAL ECONOMIC FRAMEWORK?
- WHAT INCENTIVE IS THERE FOR LOCAL GOVERNMENTS OR THE PRIVATE SECTOR TO TRACK RECYCLING ACTIVITY IN A GIVEN AREA?
- HOW ARE CHANGES IN COMMERCIAL/INDUSTRIAL ACTIVITY AND RESIDENTIAL GROWTH ACCOUNTED FOR IN ESTIMATING THE AMOUNT OF WASTES GENERATED?

TO RESPOND TO THESE NEEDS, STATE AND LOCAL PLANNING SHOULD ESTABLISH A PROCESS FOR COMPILING DATA FROM SOLID WASTE HAULERS, LANDFILL OPERATORS AND RECYCLERS BY COMMODITIES ON A REGULAR BASIS TO ASSURE SUFFICIENT DATA IS GENERATED TO ASSESS PROGRESS TOWARDS THESE GOALS. IN ADDITION, THE GOAL OF 25% RECYCLING SHOULD BE REQUIRED 4 YEARS AFTER THE STATE PLANS ARE COMPLETED. STATE PLANS SHOULD BE REQUIRED TO INCLUDE BY REFERENCE COUNTY SOLID WASTE PLANS WHICH IN TURN SHOULD BE REQUIRED TO ADOPT SPECIFIC WASTE REDUCTION PLANS. THESE PLANS SHOULD BE PREPARED AS OUTLINED IN THE CRRA PROPOSED STATE RECYCLING POLICY FOR CALIFORNIA OR IN AB3298 WHICH WAS JUST ADOPTED BY THE STATE LEGISLATURE IN CALIFORNIA (NOW AWAITING THE GOVERNOR'S SIGNATURE).

THE REFERENCE TO 50% RECYCLING WITHIN 10 YEARS SHOULD ALSO BE QUALIFIED FURTHER "WHERE RECYCLING CONSTITUTES LEAST COST DISPOSAL AND IF THE TECHOLOGY AND MARKETS ARE AVAILABLE." IN ADDITION THE REFERENCE IN SECTION 301(a)(2) TO 10% WASTE REDUCTION WITHIN 4 YEARS SEEMS TO CONTRADICT THE 25% RECYCLING GOAL.

EPA MANDATES

THE MOST EFFECTIVE LEGISLATIVE TOOL TO ENSURE PERFORMANCE BY EPA OVER THE PAST DECADE APPEARS TO HAVE BEEN SPECIFIC TIMETABLES INCLUDED IN LEGISLATION. ALTHOUGH IT WAS PAINFULLY SLOW, EPA HAS NOW FINALLY ADOPTED PROCUREMENT GUIDELINES IN LARGE PART DUE TO THE COURTS FINDING EPA DID NOT COMPLY WITH STATUTORY DEADLINES.

OTHER AREAS OF RCRA

PART OF THE MANDATE OF THIS RCRA REAUTHORIZATION SHOULD BE FOCUSING ON THE ECONOMIC DEVELOPMENT POTENTIAL OF RECYCLING AND RESOURCE RECOVERY. THE PROVISIONS OF RCRA THAT CALL FOR THE DEPARTMENT OF COMMERCE TO BE INVOLVED WERE UNDERUTILIZED AND NEVER REALIZED THEIR FULL POTENTIAL. COMMERCE AND THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT SHOULD BE INVOLVED MORE ACTIVELY IN MARKET DEVELOPMENT ACTIVITIES, TARGETING RECYCLING INDUSTRIES AS KEY INDUSTRIES FOR EXPANDING THE ECONOMIES OF URBAN AREAS THROUGHOUT THE UNITED STATES. OVERALL ECONOMIC DEVELOPMENT PLANS SHOULD BE REQUIRED TO EVALUATE THE POTENTIAL FOR RECYCLING INDUSTRIES TO BE EXPANDED OR ATTRACTED TO CITIES TO HAVE OVERALL FEDERAL FUNDING APPROVED. STATE AND LOCAL ECONOMIC DEVELOPMENT OFFICES SHOULD BE ENCOURAGED BY THE COMMERCE DEPARTMENT TO TARGET RECYCLING INDUSTRIES TO ASSIST IN PERMITTING AND FINANCING.

CONCLUDING REMARKS

I HAVE TRIED TO RESPOND TO THE ISSUES THAT YOU RAISED. I HOPE THAT OUR TESTIMONY CONTRIBUTES TO IMPROVING THE WASTE MINIMIZATION AND CONTROL ACT. IT IS CLEAR THAT AN INTEGRATED WASTE MANAGEMENT STRATEGY SUCH AS PROPOSED IN S2773 AND BEING PURSUED IN SAN JOSE REQUIRES A COMPLEX RESTRUCTURING OF ALL FACETS OF THE SOLID WASTE SYSTEM TO SUCCEED.

THIS BILL IS CRITICAL TO THE FUTURE SUCCESS OF SOLID WASTE POLICY IN THIS COUNTRY. YOU HAVE TAKEN A SIGNIFICANT STEP FORWARD TO RESOLVING OUR SOLID WASTE PROBLEMS AND REALIZING THE POTENTIAL THAT RECYCLING OFFERS. LOCAL GOVERNMENTS PARTICULARLY APPRECIATE THE AGGRESSIVE EXPANSION OF THE FEDERAL GOVERNMENT'S PROCUREMENT POLICIES. IT IS CLEAR THAT THE ROLE OF THE FEDERAL GOVERNMENT IN MARKET DEVELOPMENT ACTIVITIES IS UNIQUE AND COULD BE THE SINGLE MOST IMPORTANT ROLE FOR THE FEDERAL GOVERNMENT IN THE FUTURE PARTNERSHIP OF FEDERAL, STATE AND LOCAL GOVERNMENTS IN SOLID WASTE MANAGEMENT.

AS WE URGED LAST YEAR, YOU HAVE ACCEPTED THE CHALLENGE THAT RESOLVING THESE PROBLEMS REQUIRES A STRONG PARTNERSHIP OF ALL LEVELS OF GOVERNMENT AND THE PRIVATE SECTOR. YOU HAVE PROPOSED A SERIES OF ACTIONS WHICH CUMULATIVELY WILL RESULT IN OUR NATION ACHIEVING ITS TRUE RECYCLING POTENTIAL. THIS WILL RESULT IN A MORE EFFICIENT, MORE PRODUCTIVE AND MORE ENVIRONMENTALLY SOUND FUTURE. THANK YOU FOR YOUR LEADERSHIP!

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Testimony to the Subcommittee on Hazardous Wastes and Toxic Substances
Senate Environment and Public Works Committee
on S. 2773, the Waste Minimization and Control Act of 1988
September 22, 1988

Virginia Galle
Councilmember, City of Seattle
Seattle, Washington

I am Virginia Galle, Councilmember, City of Seattle, and past Chairman of the City of Seattle's Committee on Environmental Management and now a member of this committee. The Environmental Management Committee of our city is charged with the responsibility of addressing the solid waste management issues of our city. For the past few years, we have been immersed in the very real problem of what to do with our garbage. Therefore, I appreciate the opportunity to share with this committee our experiences, our problems and some of our solutions.

I applaud your efforts and the direction you are taking with the Waste Minimization and Control Act of 1988. Last year when I spoke to the Committee on solid waste issues faced by local governments, I made a number of suggestions where I felt the federal government could help us. I am pleased to see that you have included some of our suggetions in S. 2773. You are setting recycling goals, you are trying to strengthen recycling markets and increase the federal role to keep reducing waste.

In Seattle, we see ourselves as on the forefront or "cutting edge" of solutions to solid waste issues. Not entirely because we wanted to be there! In fact, the Environmental Protection Agency (EPA) helped push us into the limelight. we have closed our two operating landfills, one in 1983, the other in 1986. Both are now designated Superfund sites, one on the federal list and one on the State list. The capital costs of closing those two landfills has grown from 45 to 76 million dollars to meet superfund requirements and legal obligations that are a result of Superfund designation.

Our willingness to close our landfills in an environmentally sound manner has had a tremendous impact on our rates to our customers. Our average two-can customer pays $18.55 a month for service. A major portion of that cost--33%--is attributed to the cost of closing landfills. So we are a typical municipality with the problems of the future right here in the present--problems like:

- o no more landfill space
- o high costs for disposal
- o high rates

That is the "bad news." Now for the "good news." These problems have made Seattle and its citizens creative. Our citizens and business sector are currently recycling 25% of our waste stream through voluntary programs. The City has adopted a goal of recycling 60% of the waste stream by 1998 or sooner. In order to reach these goals, we are initiating a number of programs over the next several years.

We are conscientiously following the State's priorities for solid waste management which are: waste reduction, recycling, incineration and landfill.

Waste Reduction: In Seattle, we have adopted a resolution calling for the State to ban styrofoam food packaging. We have passed a ban on such food packaging within City government agencies. But, this is only a finger in the dike. There is a very rapid transition in packaging going on in this country and in the wrong direction. Packaging is up to one-third of our waste stream. It includes plastics, styrofoam, aluminum and mixed paper/plastic and plastic/aluminum. We need to stem this tide of packaging, and it needs to be done at the federal level.

Recycling:

- In February we initiated a new "Curb and Alley Collection of Recyclables Program." Our slogan is "Seattle Curbs Waste." Our program has been a phenomenal success. We started on February 1 of this year. Today we have 55% of the citizens of Seattle signed up for recycling. We separate out newspapers, mixed paper, tin and aluminum cans and glass bottles. We have two different systems underway: in the north end of the City, people separate recyclables into three bins; in the south end they commingle all recyclables in a large wheeled container. In both systems, the materials are further separated at the contractor's materials processing plant.
- We have a new Yard Waste Composting Program--"Clean Green" -- underway. Citizens can get a fee reduction at the transfer station by bringing in clean yard waste for composting. We will start curbside pick-up of yard waste January 1, 1989.
- We have initiated a pilot program with private recyclers for apartment recycling. We will add a city subsidy of $30/ton of materials recycled next year.
- We will have a "Super Recycler" half-can rate in the new rate structure in January. We will use our rates to encourage people to recycle and reduce waste by composting.

o The City has adopted a twenty-year recycling plan to meet our recycling goals.

Incineration: In response to citizen concerns on incineration, we sponsored a major study on disposal options available to the City including recycling, land fill and incineration. Because of uncertainty over ash disposal and to preserve a motivation to recycle, the City will not be purusing incineration at this time.

Landfill: Our own, close to home, landfill is no longer a disposal option for the City. Our two landfills are closed. We currently contract with the County which disposes of our waste in the regional landfill. The County is also studying its disposal choices and has asked the City to make a decision on whether to contract with the County for future disposal by October of this year. We will solicit proposals for a long distance landfill option from sites in the drier, eastern part of the Pacific Northwest. This will cover our non-recycled wastes.

As you can see, the City is approaching solid waste management in an integrated manner. We are putting our money and time where our priorities should be--in waste reduction and recycling. We will first determine how much we can feasibly recycle and then decide the best method of disposal of the residual.

EPA's Role

I believe that EPA can play an important, vital role in assisting cities like Seattle. I think that key elements for EPA in setting a national strategy would be to:

1. Articulate the vision of integrated solid waste mangement and fund technical assistance to local government to develop such systems. EPA should be a leader in setting a national goal for recycling and in encouraging local communities to explore waste reduction and recycling options as vigorously as incineration alternatives. Local governments need technical assistance and funding resources to help implement integrated waste management systems.

2. Setting Federal Standards for Packaging Regulation. Packaging regulation is a national problem that needs to be solved at the federal level. It may even be time to ban certain types of packaging that may be incompatible with the nation's waste management systems. Perhaps we should be regulating the size, shape and make-up of containers to make them more reusable. Perhaps we should

tax packaging according to the amount of costs to dispose of it.

3. Funding research and development on collection systems and recycling processes for difficult-to-recycle materials. We think we need to keep batteries and certain kinds of plastics out of an incinerator. We still don't have a good system for tire disposal. We need to develop better de-inking processes for newspaper recycling. These issues have scientific or marketing complexities that need to be addressed from a techncial point of view, and few municipalities have the staff to develop such sophisticated projects. EPA could do that analysis.

4. Carry out scientific research on technical issues. EPA is currently considering regulations for management of ash from incinerators. Our communities and citizens are looking for some leadership and advice from EPA on this subject. We are in danger of having to make decisions without benefit of knowing what the regulation will be. This forces local communities to make informed judgments on heated issues and then, potentially, face the threat of reversal.

5. Strengthen recycling markets with economic development grants and through aggressive procurement guidelines. The federal government needs to be a model for states and local communities in encouraging recycling markets. One simple method is for the federal government itself to give some advantage in procurement to industries that use or make recycled projects. For instance, the letter I received from EPA inviting me to this meeting did not say "Printed on Recycled Paper." Was it? If not, there is an undeveloped market for the recycled paper industry. Does EPA practice what it preaches in waste reduction?

We all need to do a better job in solid waste management. If our priorities are waste reduction and recycling, that is where our time, energy and money should be spent. We have to stop the problems before they get too big. We will ultimately get great cost savings by avoiding disposal of waste through reuse.

To come full circle on this issue. I think the most important area of all for EPA to help local governments is on the issue of landfill closure. If Seattle could have worked in a more harmonious partnership with the Superfund agencies to close our two landfills and could take back the extra $25 million in legal fees, claims and studies that program has cost us, we could have closed our landfills for $50 million and been able to invest the $25 million in long-term disposal systems. For us Superfund has been extremely expensive. EPA should judiciously evaluate what sites it puts on the National Priority List because it could severely limit the monies that local communities have to consider solid waste management options for the future.

Thank you for the opportunity to testify.

STATEMENT

OF

AMERICAN PAPER INSTITUTE, INC.

ON

S. 2773, "WASTE MINIMIZATION AND CONTROL ACT OF 1988"

TO THE

SUBCOMMITTEE ON HAZARDOUS WASTES AND TOXIC SUBSTANCES

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

UNITED STATES SENATE

OCTOBER 11, 1988

The American Paper Institute (API) is pleased to submit this statement for inclusion in the record of the Subcommittee on Hazardous Wastes and Toxic Substances' hearings on S. 2773, the "Waste Minimization and Control Act of 1988." Our comments are directed to the municipal solid waste management issues addressed in the legislation.

API is the national trade association representing approximately 175 companies that produce over 90 percent of the nation's pulp, paper and paperboard. Our member companies produce products from virgin as well as recyclable raw materials.

We commend Chairman Baucus, Senator Durenberger and the Subcommittee for the initiative you are taking on this important issue. The solid waste management issue deserves our attention, and the U.S. paper industry is committed to working with public officials at all levels to help identify and implement effective and meaningful policies to address it.

An overview of our industry's impressive record in recycling was submitted to this Subcommittee in testimony October 1, 1987, during oversight hearings on the solid waste issue. However, let us reiterate the following pertinent statistics about paper recycling that will help explain our industry's role in reducing the volume of waste requiring disposal:

- Of all post-consumer waste recovered for recycling in this country in 1986, over 85 percent was paper and paperboard. (Source: Franklin Associates, Ltd.)
- Approximately 28 percent of all the paper and paperboard consumed in the country each year is currently recovered to be recycled into new products. (Source: API)
- Paper recycling has realized tremendous growth in this country over the past several years, the tonnage collected rose by 75 percent between 1970 and 1986. Continued growth is forecast. (Source: API)
- Growth has been particularly impressive in wastepaper exports. Between 1970 and 1986, wastepaper exports increased by nearly 1000 percent. In 1987, these exports totaled 4.4 million tons, a more than 18 percent increase over 1986. (Source: API)

This industry is proud of its record in paper recycling, and forecasts clearly indicate that the recovery and use of recyclable paper will continue to grow. We also realize that continued growth in paper recycling, and recycling by other industries, is a critically important component of an effective, integrated approach to municipal solid waste management.

API and its member companies, as mentioned above, are committed to being constructive participants in the solid waste debate. We fully recognize that a number of areas in the country are running out of existing landfill capacity and that other waste management options must be developed.

Because of this phenomenon and our commitment to work with policymakers to find meaningful solutions, our member companies are in the process of a thorough review of the solid waste challenge and potential approaches to meet it. We intend to complete this review process within the next few months and should be prepared to comment in detail early next year on specific approaches, such as those offered in S. 2773, to improve the nation's management of municipal solid waste.

In general terms, however, our industry believes that the solid waste challenge is, in large measure, a management challenge. We need to develop and implement integrated, locally-tailored programs that efficiently channel materials to the disposal option(s) best suited to their respective characteristics.

To the maximum extent practical, recyclable products, including many made from paper, should be recycled. Other products may be more appropriately burned to recover their energy value. Yard wastes, whenever feasible, may best be composted. And yet other wastes, including ash from waste-to-energy facilities, should be landfilled in a safe and environmentally sound manner.

As an industry with long experience in recycling, we know there is no single solution to the challenge ahead. Effectively managing solid waste requires locally-tailored programs that appropriately integrate materials recycling, waste-to-energy, composting, landfilling and, possibly in some troublesome areas such as hazardous household products, source reduction.

Although we are not prepared at this time to comment in detail on S. 2773, we would like to highlight a few issues for your consideration. With regard to recycling, the paper industry has achieved a remarkable record based on market forces. With the aid of better collection and separation, the market has and will continue to absorb additional paper for recycling. However, the quantity of material the bill calls for in recycling may require approaches that are beyond the normal cost-effective return on investment in recycling. The industry is interested in further discussions about the most appropriate and effective role government can plan to encourage additional recycling.

We would also like to offer some initial comments on the provisions of the legislation that address packaging. Packaging is obviously a large and visible portion of the municipal waste stream and, as a result, is often considered a convenient "target" in the waste management debate.

However, too often lost in the discussion is the fact that packaging serves a variety of important and essential functions, including product protection and identification as well as tampering prevention. Claims of excessive packaging are often overstated. In addition, and surely contrary to popular perception, studies indicate processed-packaged foods actually contribute less household waste than their unprocessed counterparts.

The benefits and necessity of packaging and packaging's role in solid waste are frequently misunderstood. We encourage the Subcommittee to give packaging careful consideration during your deliberations to ensure that it is addressed in a balanced manner.

In this regard, the section proposing a $7 per ton tax on virgin materials used in packaging, and the container tax of .07 cents per rigid container, needs careful review from the standpoint of equity. First, there is the question of whether the packaging industry should be singularly targeted as the revenue source for federal municipal solid waste management initiatives. Second is the question of whether such a tax treats various packaging materials evenly. Different packaging taxes may not provide equal treatment to all materials and, therefore, could result in the favoring of one packaging material over another.

We look forward to commenting in detail on the provisions of the legislation after we have completed the review process mentioned above. A national dialogue on solid waste management is vitally important if we are to develop an effective response to the challenge we face. Our industry is committed to being constructive and cooperative participants in this process, and we look forward to working with the Subcommittee in pursuit of meaningful policies to improve the nation's management of municipal solid waste.

National Association of Manufacturers

Comments

The Waste Minimization and Control Act of 1988 (S. 2773)

Submitted to the Subcommittee on
Hazardous Waste and Toxic Substances,
of the Environment and Public
Works Committee
United States Senate

Submitted on October 14, 1988
for the Docket

Executive Summary

The NAM supports sound waste management policies to deal with solid and hazardous waste.

The NAM is pleased to offer comments on S. 2773 (100th Congress) pending before the Senate Environment and Public Works Committee.

While the NAM commends this effort to deal with many of the solid waste management objectives, we remain concerned with a number of issues. The major problem areas are:

- Efficiency Standard (5% waste allowable)
- Waste categories
- Reporting requirements for small manufacturers
- Continuous monitoring requirement
- Packaging tax

Areas of agreement or potential agreement are:

- Waste management hierarchy (as it includes source reduction, recycling and treatment)
- Stronger Federal role in solid waste management
- Technical and financial assistance for waste minimization
- Waste export "agreement"

The NAM is pleased to offer comments on the Waste Minimization and Control Act of 1988 (S. 2773) pending in the 100th Congress.

The NAM supports the Resource Conservation and Recovery Act (RCRA) and its overall goals toward safe and effective waste management.

Waste products, some of which are potentially hazardous to human health and the environment if mismanaged, are generated by all segments of society, including industrial facilities, commercial establishments, residences, and federal, state, and local government agencies. NAM supports a comprehensive, efficient, and effective hazardous waste management regulatory system complemented by accessible and affordable facilities and services.

Waste Management Hierarchy;

The NAM supports the waste hierarchy as defined in S. 2773.

The NAM hopes that S. 2773 will recognize all steps in a good waste management hierarchy. These steps include all steps to reduce both the volume and/or toxicity of wastes. It is the position of NAM that waste minimization is the preferred option for the management of industrial hazardous wastes and that federal and state regulatory programs should encourage the development of flexible and complementary management approaches, including where practicable source reduction, onsite or offsite recovery and reuse, treatment to reduce the toxicity, volume, or mobility of substances, and incineration. Widespread voluntary industry initiatives to minimize waste have been undertaken. There is need for a simple, uniform system of reporting which recognizes previous progress attained by innovative firms and which is capable of accurately assessing further efforts. S. 2773 should encourage all methods of waste minimization such as source reduction, recycling, and treatment (which includes incineration) where environmentally prudent.

Industry and government cooperation are necessary to define what is achievable and to successfully achieve reductions in waste generation. The NAM is currently working to improve the industry's ability to minimize waste where applicable through the institution of a number of programs and practices. These effort includes publishing a manual on waste minimization practices by various manufacturers. The bill apparently recognizes that there is limited potential for waste minimization and source reduction for some industries and this is a major concern of the NAM's.

The waste management hierarchy should be based on waste-specific and site-specific conditions, taking into account economic practicalities. The NAM is pleased to see this concept incorporated in Section 102 of the proposed legislation in the requirement to consider the market demands for recycled materials.

The NAM recognizes that government has a vital role to play in encouraging waste minimization. We agree that government should not mandate prescriptive regulations for waste minimization, but should facilitate waste minimization by encouraging the transfer of technology, tracking the progress in waste minimization, and the elimination of regulatory barriers. Environmental quality control efforts can achieve broad social and economic benefits to the general public. Such efforts are costly to industry since, in most instances, capital and operating costs for abatement facilities do not yield a direct economic return. Such costs could create serious economic dislocations within our industrial society, and specific financial offsets should be provided to industry by government. These should take the following form:

1. Accelerated amortization, without loss of investment credit, up to and including the immediate write off of the facility at the option of the taxpayer.

2. State and local tax exemptions.

3. Continued tax-exempt status for income from industrial revenue bonds to finance pollution control facilities.

Taxes on effluents and emissions represent an unmanageable, uneconomic, negative approach, and, in principle, allow polluters to continue to adversely use our environment by payment of a tax. Those who comply with environmental standards should not be required to pay such a tax, and those who do not comply should not be excused by tax payment.

The costs of pollution control, as all other costs of production, must be included in the price of the product, or else the producer will soon cease to produce. U.S. industry is spending billions a year on new pollution control facilities plus the same amount each year in operating and maintaining pollution control facilities already in place.

The NAM also supports the development of many of the programs that the bill would establish, such as programs for administering state grants, establishing an information clearinghouse, studying regulatory impediments, and better organizing data collection at EPA. To this end, the NAM is working with the EPA and the National Governors' Association to better coordinate the waste data collection under RCRA and SARA III.

State EPA Roles

The NAM agrees that the basic structure of the Subtitle D program for nonhazardous solid wastes should be retained as a state-oriented program. This program is most efficient and effective if there is state primacy over implementation within a broad federal framework. Flexible federal criteria enable states to develop appropriate programs targeted to their own environmental needs yet remain consistent with national waste management objectives. EPA should be responsible for providing performance standards, technical and funding assistance in state planning and controls, and state program oversight.

The states should be responsible for assessing solid waste problems, prioritizing needs, developing waste management plans, developing and implementing specific regulatory controls, providing for adequate waste management capacity needs, and monitoring compliance and enforcement. Any EPA enforcement should be against state agencies for failure to comply with state plans. Individual facilities should not be penalized for failures of state entities.

The extremely broad universe of solid waste activities, industries and institutions, and environmental conditions preclude the use of one single approach dictated at the federal level. The specific mix of industries, natural resources, geography, climatological and geologic factors -- as well as socioeconomic conditions within each state -- must be taken into account in selecting the most appropriate approach in a state's solid waste management program. The existence and adequacy of state programs for each particular waste category of solid waste should be considered in developing federal criteria to avoid unnecessary or inefficient disruption of existing programs.

Waste Categories

The NAM believes that it is essential for the Subtitle D program to use categories to differentiate wastes produced by different activities. The wide variety of solid wastes which would fall under this program are produced by many different activities including: heavy industry, the service sector, agriculture, construction, households, governments, hospitals, transportation and the extractive sector. The wastes have a wide diversity of properties and the potential hazards they pose very based on such factors as the volume and nature of the waste; the number, size, and complexity of sites at which the wastes are generated and disposed; location in respect to population centers and exposure; typical management practices and regulatory schemes; and their potential for reasonable source reduction or recycling. Municipal wastes are highly variable and range from inert materials, such as metal or glass, to hazardous materials such as pesticides or halogenated solvents. The wastes are also generated and managed in highly populated areas. Because of these differences, the various types of wastes pose different hazards; and, more importantly, there are different strategies available to regulate the various wastes. Therefore, federal criteria need to be specific as to the waste category and be flexible enough to allow states the administrative flexibility to focus their solid waste management programs on the specific situations presented within their states. The use of waste categories sets forth a usable construct -- a way to organize this massive social function called solid waste management. It lends itself to national goal-setting for the particular waste generation activities of concern; yet allows the means to achieve these goals be determined at the regulatory level, tailored to the hazards posed.

The concept that requirements developed for each waste category should provide for the "protection of human health and the environment" is a good one. Requirements should be performance-based, taking into account sound scientific principles, existing state and federal regulatory programs, current management practices, and the cost-effectiveness and technical feasibility of alternate control measures. Requirements should be based on what is actually needed to protect health and the environment. Technology for technology's sake does not lead to more cost-effective or environmentally beneficial methods to protect human health and the environment.

Efficiency Standard

The potential ability to comply with a 5-percent release standard on production throughput or any other proposed standard depends, to a large degree, upon the resolution of definitional issues. Section 305(a)(2) requires that EPA promulgate regulations specifying the manner in which production throughput is to be calculated. The NAM suggests that alternatives be identified and evaluated for their administrative, economic, and technical practicalities prior to determining a waste minimization approach -- let alone specified measures within an approach. This is especially needed for the thousands of small and medium size manufacturing facilities. The NAM suggests that EPA conduct a thorough econometric study of a number of industries in SIC Codes 20-39 to determine the types of voluntary goals, if any, that can be set for a variety of manufacturing and industrial classes. Permitted discharges should not be included in the computation of the releases.

The definition of the performance standard is not clear as to whether it accepts waste treatment (including incineration) toward the 95% reduction.

Reporting Requirement

The scope and frequency of reporting requirements are unclear. Section(a)(1) refers to an efficiency standard applicable to "any person required to file a toxic chemical release form under Section 313 of SARA." It is unclear whether the efficiency standard covers only those chemicals for which a report is necessary or any chemical contained on the Section 313 list that is released by the facility, regardless of the amount. This is further complicated since the amount of a chemical release allowed before a Section 313 reporting requirement is triggered decreases over a period of time.

Section 305(a)(4) proposes that each facility covered submit "a plan to quantify and report on ... the manner in which each hazardous substance ... is consumed, used and/or released." It is unclear how such a plan to quantify and report is supposed to relate to SARA Section 310, 311, and 313 reports, potential reports under TOSCA 8(a), and TOSCA 8(b) periodic reports. The complexity and feasibility of such a report would depend on the extend of coverage of the "hazardous substance" and "waste" definitions.

Waste Minimization

The NAM supports the concept of waste minimization and believes that all waste generators should be encouraged to develop or adopt practices that reduce the volume and toxicity of wastes, to the extent practical. Indeed, the industry has a history of recovery and recycling of materials for reprocessing under RCRA.

Waste minimization programs were created in many petroleum facilities prior to the regulatory requirements which now dictate their existence. The impetus for these programs was a commitment to environmental quality in addition to economic considerations.

Most waste minimization programs are under the direction of a corporate level committee, which develops and directs the waste policies, establishes the financial priorities, and assures that waste minimization considerations are incorporated into future process designs. These programs have been very successful in reducing the amounts of wastes generated and serve as the basis for further waste minimization developments. The NAM supports corporate wide waste minimization commitment.

NAM believes that sufficient incentives already exist to stimulate industry to develop waste minimization programs and technology. Without the availability of an adequate data base upon which to base prescriptive waste minimization goals, the NAM believes that it is premature to set one efficiency standard for several manufacturing and industrial classes. The waste minimization reporting requirements appear to be redundant with those of other environmental statutes. In addition, the NAM questions the feasibility and practicality of continuous monitoring requirements.

Improvements in laws should be based on a good understanding of what is feasible and reasonably achievable. Increased stringency for stringency's sake is not beneficial to any affected party. Waste minimization policies should be flexible so that they may allow for maximum cooperation between EPA and industry as the state-of-the-art is further refined. Therefore, we suggest that Congress proceed with caution in the consideration of various measures where data are lacking and that further investigations are warranted before prescriptive legislative mandates are enacted.

Definitions

Concise definitions and consistent terminology are needed throughout the bill in order to avoid ambiguities in the application of future regulations. For example, Section 305 of the bill, "Waste Minimization Performance Standard," amends the Solid Waste Disposal Act but sets an efficiency standard and other requirements for "hazardous substances" for any person required to file a SARA Section 313 "toxic chemical" release form. The proposed legislation does not define "hazardous residual," "hazardous substance," "toxic chemicals." The term "hazardous substance" includes a very broad range of materials as defined in Section 101(14) of CERCLA. The term "hazardous chemical" defines an even broader range of materials under OSHA's Hazard Communication Standard and SARA Section 311. The term "toxic chemical" is identified by a relatively short list of materials under SARA Section 313.

Continuous Monitoring

Several provisions in Section 305 require manufacturers to install "continuous emission and environmental monitoring equipment capable of detecting losses to the environment of substances" listed under SARA section 313; or capable of detecting and reporting all emissions or discharges in excess of ... permits, ... or 313 substances ... in excess of threshold limit values." The NAM suggests that periodic sampling of waste streams can be equally effective as continuous monitoring in meeting the intended performance standard and much less expensive for industry to implement. In addition, continuous monitoring systems do not exist for all SARA 313 chemicals and threshold limit values have not been established for all SARA 313 chemicals. Further, continuous monitoring would be extremely expensive for small and medium size manufacturers.

"Fugitive" emissions monitoring the atmosphere from minuscule leaks from thousands of individual items of process equipment at flange points (required for maintenance) or at shaft seals of valves, pumps, or compressors would be very costly. These fugitive leaks are similar to ones that can occur in a car or home air conditioning system. The NAM is not aware of any practical method of using "continuous monitoring equipment" to detect or measure the amount of these losses.

The NAM is aware that the American Petroleum Institute and other trade associations have carried out monitoring surveys to measure the average 24-48-hour concentration of many SARA Section 313 chemicals in the ambient air near refinery fencelines. Most were found at levels of 1-5 parts per billion, which is near the limit of detection for the most sophisticated monitoring techniques. In many cases the "downwind" concentrations were only slightly elevated over the "upwind," and generally, no different than the concentrations found in most urban locations. This suggests that there are many other important sources of these emissions. It would be impossible to use ambient air concentration measurements to measure with any usable accuracy the amount of emissions or to relate to threshold limit values or permit violations.

Energy Wastes:

Oil and gas exploration and development wastes have already been fully reviewed by the U.S. EPA and have determined to be nonhazardous. The NAM believes these wastes should remain classified as nonhazardous under the Waste Minimization and Control Act of 1988.

Packaging

The NAM acknowledges the need to establish incentives for consumers who have a preference for goods packaged in a manner that meets the purposes of Section 307(b). However, charging a fee may serve as a disincentive since the cost would likely be passed onto the consumer. This could place the seller at a competitive disadvantage. In addition, the seller may be placed at a competitive disadvantage when trying to compete for consumer appeal if unable to use a larger size or more attractive package material.

Often packaging prevents waste by protecting the product during shipment and storage. Other forms of packaging may protect the consumer from disease, contamination or tampering. Packaging may also add to the efficiency of the product and lengthen shelf-life.

Waste Exports

The NAM supports the concept that the United States should not attempt to solve waste problems by exporting their waste to other countries.

The NAM assumes EPA and receiving country informed consent policy is adequate to protect receiving country from dangerous wastes of which the receiving country is not aware. If there are documented abuses of this exporting arrangement, then the NAM will consider additional controls.

However, a broad prohibition of exports of solid wastes may unintentionally restrict legitimate export operations. Specifically, Section 206, "Waste Exports," needs clarification to define the requirements for exports that can potentially become a waste when materials are processed in another country. For example:

- Iron ore shipped from the U.S. to another country for the production of steel would contain impurities (soil, rocks, etc.) that are removed during the steelmaking process. Are these impurities considered a waste at the time they are shipped as part of the ore?

- Packaging materials used to contain a product during storage and transport (paper boxes, wood crates, metal cans, dunnage, etc.) can ultimately become solid waste in the receiving country. Since the U.S. supplier does not expect to have these containers returned they are, in effect, shipping them to the receiving country for disposal. Does this mean that all shipments of packaged products to other countries must cease until the U.S. and that country have entered into a "solid waste" agreement?

- Are ballast waters associated with the shipment of crude oil potentially subject to this provision?

The NAM recommends clarification on the types of solid waste potentially affected by the proposed waste export requirements.
Failure To Submit a State Solid Waste Plan

The NAM has strong reservations about the provision proposed in Section 202(e) that would provide sanctions for a state'sfailure to submit a solid waste management plan. This provision would prohibit all federal agencies from issuing "any grant or loan or loan guarantee or ... any license or permit for any activity (in an uncooperative state)-unless a Federal agency can demonstrate that such activity shall not cause or contribute to the generation of solid waste."

There are very few activities that are not affected by federal funding or permitting authority. There are virtually no activities that do not generate some quantity of solid waste. Thus, the potential effect of this provision would be to virtually shut down a state. Innocent corporate and individual citizens would be unfairly penalized for the failure of a state government to submit a plan.

Schedules

Proposed Section 203, "Permits for the Disposal of Solid Wastes," requires permits to be issued within one year after the bill is enacted; otherwise, the solid waste management activity is presumably automatically prohibited. A one-year deadline does not allow the states enough time to modify their Subtitle D program, give ample notice to solid waste management facility owner/operators, obtain and evaluate necessary facility information, and act on permit applications. This one-year requirement is even more impractical given the number of sites needing to be permitted and the resources (personnel and funds) that will be required. The NAM hopes S. 2773 would avoid the unrealistic deadlines as in other environmental statutes. This only creates unfair responsibilities for the U.S. EPA, state agencies, and manufacturers.

Proposed Section 204, "Solid Waste Management Guidelines" sets forth a schedule under which the Administrator is to develop and promulgate prescriptive minimum design and operating standards for the categories of solid wastes. Although the intention may be to prioritize agency action, we observe from similar schedules set under the 1984 amendments, that the dates tend more to trigger litigation than to lead to timely development of effective regulatory programs.

A recent report prepared by the U.S. General Accounting Office (GAO), which indicated that statutory deadlines may actually impede the implementation of other important environmental protection efforts.

A more practical approach may be to rank-order the waste categories for regulatory action allowing greater agency flexibility in determining the scope and appropriateness of standards to be developed.

The NAM looks forward to working with the Senate Environment and Public Works Committee in the 101st Congress toward a timely reauthorization process.

The NAM will be particularly interested in resolving the solid waste disposal and medical waste problems.

It is clear that our waste problems must be shouldered by all Americans -- not just industry alone. The NAM remains ready to work with the author and supporters of S. 2773 to remedy our solid and hazardous waste problems.

The NAM remains available to discuss these issues with the Senate Environment Public Works Committee at the earliest opportunity.

NASR
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Statement of David Petersen

President

THE NATIONAL ASSOCIATION OF SOLVENT RECYCLERS

before the

Subcommittee on Hazardous Waste and Toxic Substances

The Waste Minimization and Control Act of 1988

September 26, 1988

The National Association of Solvent Recyclers (NASR) represents 50 independent businesses that provide recovery and reclamation services to solvent users of all sizes in many industries. NASR's members play a vital role in combatting the adverse environmental effects of excessive generation and poor management of solvent wastes. We are dedicated to reducing the need for waste treatment and disposal, and demonstrate that commitment by recovering and reusing over one hundred million gallons of solvent waste each year.

NASR has a strong interest in the hazardous waste reduction issue, and in particular the development of federal legislation to encourage and facilitate source reduction and recycling in U.S. industry. When the House Energy and Commerce Subcommittee on Transportation, Tourism and Hazardous Materials considered the Hazardous Waste Reduction Act (H.R. 2800), NASR provided testimony and correspondence in support of retaining recycling as a central component of that legislation. Yet despite our efforts, the substitute to H.R. 2800 excludes recycling from the bill's provisions. We believe that is a mistake -- not only for our industry, but for the public and the success of our national waste reduction strategy.

The Waste Minimization and Control Act (S. 2773) addresses many of NASR's concerns under Title III of the bill -- The Waste Reduction and Recycling Act of 1988. NASR applauds the efforts of Senators Baucus and Durenberger to incorporate recycling in all of the bill's provisions, recognizing that recycling essentially turns a waste into a product, used in place of another product. However, we believe S. 2773 would be dramatically improved through clarification of its provisions.

First and foremost, S. 2773 should define the term "recycling." Regulators and legislators alike question the application of the term to a variety of practices, and it cannot be a meaningful part of the bill without careful definition. NASR urges the adoption of the following definition:

> The term "recycling" means the processing of a waste stream in such a way that a component part or parts can be used or reused in place of non-waste material.

This definition addresses the central goal of waste reduction legislation: reducing the quantity of waste destined for treatment and disposal. Some organizations have called for a definition based upon the percentage of revenues generated by sales of the recycled product as compared to those generated for managing the original waste. Others would measure the potential impact of the recycling process on the environment. These suggestions reflect valid concerns about pollution controls and regulations governing certain processes, but inadequately define recycling for the purposes of waste reduction legislation.

NASR's proposed definition encompasses all practices that render a waste a usable product. For example, in the case of commercial solvent recycling, our member companies derive two products from solvent waste: clean solvent and solvent-based fuels. After a solvent recycler has reclaimed as much clean solvent as possible from a waste stream, the remaining still bottoms generally have a high Btu content and are therefore ideally suited for fuel blending. Solvent-based fuels are used with increasing frequency in the energy-intensive cement and lightweight aggregate industries in place of coal and other conventional fuels.

EPA plans to issue a final rule bringing cement and aggregate kilns that burn solvent-based fuels under RCRA regulatory control in February of 1989, but these kilns already operate extremely safely and efficiently under stringent federal and state regulations. Most cement and aggregate kilns provide temperatures high enough and residence times long enough to exceed EPA incineration standards for destruction of hazardous constituents in the fuel. Furthermore, air emissions from a kiln using solvent-based fuel in general are not more threatening to the environment than those from a kiln burning coal. These fuels generally do not contain sulfer, and so SO2 emissions from burning solvents are actually lower than those from burning coal. (See "Hazardous Waste Combustion in Industrial Processes: Cement and Lime Kilns," EPA/600/2-87/095.)

Thus, burning solvent-based fuel in cement and lightweight aggregate kilns (1) conserves coal, a valuable resource, (2) destroys hazardous components in the solvent waste, and (3) poses no significant threat to the environment, and in particular no greater threat than the conventional fuel it replaces. By reclaiming clean solvent and blending the remaining still bottoms into fuel, solvent recyclers can recycle 95-100% of the material they handle.

NASR's second area of concern relates to the first. Section 305(a)(1) of the bill calls for a national performance efficiency standard prohibiting "the release to the environment of more than 5% of production throughput of hazardous substances by any person required to file a toxic chemical release form under section 313 of the Superfund Amendments and Reauthorization Act of 1986. . ." In Section 301(a)(1) of the bill, calculation of these releases is said to include quantities of "managed wastes." NASR believes the bill should specify that the term "managed wastes" does not include wastes destined for recycling. Under our proposed definition of recycling, this would mean that used solvents that are (1) distilled for recovery of clean solvent and (2) blended into solvent-based fuels would be excluded from calculations of quantities of managed wastes.

Furthermore, NASR urges the Subcommittee to clarify which industries would be covered by the bill's efficiency standard. Section 301(a)(1) states that the standard would apply to only manufacturing industries, "in SIC's 20-39." Section 305(a)(1), however, states that any person reporting under section 313 of SARA must comply. Presently, section 313 covers only industries within SIC's 20-39, but EPA has discretion under the Superfund amendments to broaden the coverage of the section to other industries.

Commercial solvent recyclers provide a service to waste generators and are classified under SIC 7389. They do not generate waste themselves, but rather reclaim and reuse as much of the material as they can. It is in the recycler's best economic interest to recycle as much of the material as possible; that is the purpose of the industry. However, the recycler cannot control the percentage of the incoming material that will be suitable for reclamation, the percentage suitable for fuel-blending, or the percentage that must be incinerated. A recycler may be able to recover and reuse 100% of one batch of spent solvent but have to incinerate 20% of another simply because of the composition of the material. Therefore, application of the performance efficiency standard to this industry would not serve the purposes of S. 2773. NASR proposes that the bill clearly limit the application of the standard to only manufacturing industries or those in SIC's 20-39.

Thank you for your consideration of these matters. We believe that our recommended changes in S. 2773 will prevent impeding beneficial recycling activities and would enable NASR to fully support Title III of the bill. We look forward to working with the Subcommittee in developing an effective national hazardous waste reduction program and to becoming a major contributor to its success.

We request the privilege of supplementing these written comments prior to the close of the hearing record in the event additional issues arise at the hearing.

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CBS 88-225

UNOCAL

Carleton B. Scott
Director, Environmental Sciences

September 23, 1988

The Honorable Quentin N. Burdick
Chairman, Environment and
Public Works Committee
Dirksen Senate Office Building
Room 458
Washington, DC 20510

Dear Senator Burdick:

WASTE MINIMIZATION AND
CONTROL ACT OF 1988

Unocal Corporation is very interested in the Waste Minimization and Control Act of 1988 authored by Max Baucus (D-MT). The Act will impact many of Unocal's operations including petroleum, exploration and production, mining, refineries and chemical plants and their waste management practices.

Unocal endorses the comments by the American Petroleum Institute and in addition requests that the attached comments be made part of the hearing record for this proposed legislation.

1. MUNICIPAL SOLID WASTE LANDFILLS POSE SIGNIFICANT ENVIRONMENTAL AND HEALTH RISKS

Scientific and technical data from EPA contractors, regulatory agencies, and the scientific literature strongly suggest that combined health and environmental risks from MSWL's may substantially outweigh similar risks from industrial hazardous waste sites that have been the main focus of Superfund to date.

These risks arise from anaerobic biochemical reactions occurring within the landfills which convert ordinary biodegradable "nonhazardous" domestic and commercial wastes, e.g., paper, yard wastes, dry-cleaning solvents, into large tonnages of gas (methane and carbon dioxide), as well as toxic and carcinogenic chemicals such as aromatics and chlorinated hydrocarbons which are released through leachate and swept into the community by the escaping gas.

The number of MSWL's requiring control of environmental and health risks appears to be large:

- About 20% of the sites currently on the National Priorities List (NPL) of some 1200 sites are MSWL's;
- OTA and GAO independently estimate that 5,000-10,000 additional MSWL's could be added to the NPL, compared to only 1,000-2,000 additional hazardous waste landfills; and
- Some unknown, but potentially large, number of currently operating MSWL's face the risk of closure, and subsequent addition to the NPL, because of inability to comply with: 1) release provisions of RCRA, CERCLA/SARA and state laws such as California's Proposition 65; or 2) the new performance requirements and financial assurance provisions of the proposed Baucus Waste Minimization and Control Act of 1988.

The existing Superfund clearly would be overwhelmed by these additional sites, further delays and transactional costs would escalate, and financial burdens would become unmanageable for owners/operators and users of the sites, public as well as private.

2. AN APPROACH MUST BE DEVELOPED TO CONTROL ENVIRONMENTAL AND HEALTH RISKS PROMPTLY AND PROPERLY

The upcoming RCRA reauthorization process provides the proper opportunity to adopt a rational approach. In that reauthorization, existing RCRA authorities should be expanded to provide for the following:

2.1 Design and Operating Standards

Require new and existing MSWL's to be designed and operated to prevent contamination of groundwater, to prevent release of toxics into the air, and to make productive use of the produced methane through conversion to electric power or pipeline-quality gas.

2.2 Long-term Management

Require owners/operators of new, existing and closed MSW sites to monitor for adverse health or environmental risks, and to provide funding arrangements capable of correcting any future health or environmental problems and ensuring long-term (several decades) maintenance of site security and collection/treatment facilities for leachate and gas.

2.3 Separate Requirements for Nonbiodegradable Wastes

Establish separate design and operating requirements for sites or units to be used exclusively for large-volume, nonbiodegradable, low-toxicity wastes (such as construction debris, soil, mine tailings and drilling wastes) that do not require special collection/ treatment facilities for leachate or gas.

2.4 MSW Remediation Fund

Establish a separate RCRA funding arrangement for correcting health and environmental problems at closed MSW sites, or at those sites where the owner/operator (private or municipal) becomes financially incapable of correcting such problems and productively utilizing the produced gas. Structure the fund to be capable of promptly and properly remediating such sites with minimal transactional costs and risks of unmanageable financial burdens on municipalities, industrial or commercial contributors to those sites, or their respective insurers.

The funding mechanism should specifically recognize the fact that the main source of toxic leachate and air emissions from MSWL's is from the anaerobic decomposition of ordinary domestic and commercial wastes. To ensure conformance with the "polluter should pay" principle, the funding mechanism should be broadly based and tied to the disposal of biodegradable wastes. Funding options could include one or more forms of a tax on materials likely to be landfilled, or a tipping fee applied equitably to all generators and disposers of biodegradable wastes (companies, institutions, commercial establishments, households).

2.5 Isolate Superfund

Keep the existing Superfund dedicated to mitigating risks from industrial hazardous waste sites, and use the MSW Remediation Fund for sites which contain mainly municipal solid wastes. For those MSW sites already listed on the NPL for Superfund action, either reassign them to the MSW Remediation Fund under RCRA, or require that all potentially responsible parties (PRPs) to those sites be treated equitably under Superfund, be they municipal, commercial or industrial, in accordance with their respective contributions to the health and environmental risks.

IN SUMMARY:

Environmental and health risks stemming from the landfilling and subsequent decomposition of domestic and commercial wastes clearly must be controlled. New and existing landfills must be designed and operated to minimize future risks, and closed or abandoned landfills must undergo remediation if risks are significant.

These risks stem from the daily activities of our society, and an MSW Remediation Fund, under an expanded RCRA, is the most equitable means of ensuring prompt control of risks with costs spread across all of our society and tied directly to the amount and nature of the wastes discarded.

We would welcome any opportunity to expand upon the observations and recommendations made in these comments.

Very truly yours,

Carleton B. Scott

C. B. Scott

CBS:shc/6188k
Attachment
cc: The Honorable M. Baucus
Mr. Peter Prowitt

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October 5, 1988

The Honorable Senator Max Baucus
The Hart Senate Office Building
2nd Street & Constitution Ave., N.E.
Washington, DC 20510

Re: Waste Minimization and Control Act of 1988.

Dear Senator Baucus:

We are in receipt of a copy of S.2773 introduced by Senator Durenberger and yourself entitled the "Waste Minimization and Control Act of 1988." A review of your remarks contained in the Congressional Record of September 9, 1988, as well as the provisions of S.2773, indicates that the legislation proposes standards for reducing, recycling, and managing solid waste. Additionally, the bill will also reauthorize the Solid Waste Disposal Act of 1980, as amended, through 1992.

We understand that a public hearing was held on this bill before the Senate Committee on Environment and Public Works on September 26, 1988. We respectfully request that the comments contained in this letter be included in that hearing record.

These comments are offered on behalf of the following oil and gas trade organizations representing operators in seven Appalachian states:

Independent Oil & Gas Association of New York;
Independent Oil & Gas Association of West Virginia;
Kentucky Oil & Gas Association;
Ohio Oil & Gas Association;
Pennsylvania Natural Gas Associates;
Pennsylvania Oil & Gas Association;
Tennessee Oil & Gas Association;
Virginia Oil & Gas Association; and
West Virginia Oil & Natural Gas Association.

Our general concerns about the bill as it is presently drafted are based upon a number of factors articulated in the paragraphs which follow.

First, any legislation of this type which seeks to regulate the waste management practices of the oil and gas industry must recognize the fundamental differences which exist among various industry categories and, indeed, from region to region within the same industry category. A unique combination of environmental and economic factors exists in the Appalachian states which set the area apart from the rest of the oil and gas producing areas in the United States. Appalachian crude oil contributes a significant percentage of the nation's lubricants. Our natural gas is important because of its volume, close proximity to major northeast markets, and because of the extensive use of geologic formations here for the storage and retrieval of natural gas. Appalachian wells produce small amounts of wastes when compared to elsewhere in the nation. Additionally, the vast majority of Appalachian wells produce such a small amount of product that they qualify as "stripper" wells. Finally, because of the climate, geology, and hydrology of the region, as well as the nature of the drilling and production wastes in the region, less reliance has been placed on disposal techniques used elsewhere in the nation. Concomitantly, increased reliance on disposal techniques such as land application, roadspreading, stream discharge, and annular disposal has occurred.

In order to accommodate the fundamentally distinct nature of the Appalachian oil and gas industry, legislation should mandate that such differences be taken into account through the establishment of a flexible regulatory program. In this regard, we agree with at least one provision of the bill that gives the states the lead in developing their own regulatory programs which, while they may be as stringent as a federally created program, will be much more able to take into account the differences between industries and regions within the oil and gas industry across the country.

Another point of concern is with the economic impact of any program such as that proposed by S.2773 on industry in the Appalachian states. The demonstrated marginal economics of the oil and gas business in the Appalachian states creates a situation where the industry is very sensitive to increased regulatory costs. While the Appalachian region has large numbers of wells, these wells produce small amounts of oil and gas. A survey conducted by us of more than 5,000 primary production oil wells and 12,000 natural gas wells reveals that 99% of the oil wells and 97% of the gas wells in this region were "stripper wells" as defined by the Federal Energy Regulatory Commission.

This same survey reveals that these wells were so economically sensitive that even a $200 increase in annual operating and maintenance costs would cause almost 20% of the 200,000 Appalachian Basin wells to become uneconomical to operate. Any new statutory program such as that proposed in the waste minimization bill must take into account the sensitive economic operating conditions in the Appalachian region.

Finally, as you are no doubt already aware, EPA is presently undergoing a study process of wastes from the "exploration, development and production of crude oil, natural gas, and geothermal energy" as mandated by Section 8002(m) of the Resource Conservation and Recovery Act ["RCRA"]. As announced in the July 6, 1988 Federal Register, 53 Fed. Reg. 25446, the results of EPA's study, among other recommendations, announce that EPA will proceed with the development of a comprehensive national solid waste program under already existing RCRA Subtitle D authority to address the environmental aspects associated with waste management practices in the oil and gas industry. It is our recommendation that the development of any national solid waste program for the oil and gas industry, such as that contemplated by S.2773, should await the outcome of any EPA regulatory action on the subject.

We appreciate the opportunity to offer these initial comments on S.2773, the "Waste Minimization and Control Act of 1988." We invite you to contact us with respect to any questions these comments might raise.

Very truly yours,

David M. Flannery

David M. Flannery

Counsel for
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DMF:jlv

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October 5, 1988

Chairman Max S. Baucus
Subcommittee on Hazardous Wastes
and Toxic Substances
Committee on Environment
and Public Works
United States Senate
Washington, DC 20510

Dear Chairman Baucus:

The Society of the Plastics Industry, Inc. (SPI) appreciates the opportunity to provide comments for the hearing record on the Waste Minimization and Control Act of 1988 (S 2773). Because of the short amount of time available to evaluate this proposal, the SPI testimony necessarily will be limited and only generally highlight our views. We hope to have an opportunity to work with the Committee staff between now and the reintroduction of the proposal next year to more thoroughly elaborate on these comments and to provide recommendations.

TITLE I - GENERAL AMENDMENTS

Section 102 Objectives of National Policy

SPI supports the approach in the bill for a multi-component solid waste management policy. We believe, however, that it would be useful to add "source reduction" to the definitions section. EPA has a dual definition for source reduction: (1) elimination of toxics in the waste stream, and (2) volume reduction. SPI believes this distinction is an important one and would urge the Committee to consider including both these concepts in the definitions. For the sake of clarity in future discussions and decision-making, it would seem to be valuable if these two issues could have different names such as toxic source reduction and volume source reduction. If these two definitions are considered, it would seem appropriate to incorporate them in a different way into the prioritization scheme in (e).

Volume source reduction can occur both in the manufacturing process when improvements in efficiency result in smaller amounts of waste generated for the same amount of product manufactured, and through improvements in product design or performance that lead to longer product life so the product does not quickly enter the solid waste stream. Toxicity source reduction can result from process changes that cause the waste generated to be less hazardous or through the substitution of raw materials or additives to the product. There may be opportunities for reducing the presence of some toxics that pose a real threat to the public or environment, and such elimination should be encouraged.

Although volume source reduction has a role in the national solid waste policy, SPI believes it will have limited impact as a solution to the solid waste disposal problem. Most industries already have made major steps in waste volume reduction. We are concerned that the potential for volume reduction may be overestimated. This could lead those involved in the search for meaningful solutions to the solid waste disposal problem to defer tougher decisions such as siting of landfills and waste-to-energy incinerators which SPI views as elements of the overall solution (along with volume and toxicity source reduction, and recycling). Therefore, it should not be listed or characterized as the first priority in the waste management hierarchy. Further, if volume reduction raises the specter of product bans, such a controversy could divert critical resources and debate from the development of sound solid waste disposal solutions. The separation of these two issues would allow for a more direct focus and evaluation of them.

However, any attempt to achieve source reduction by restricting or banning products must include consideration of the useful benefit of the item(s) in question. Such an analysis should include energy consumption, recyclability, cost savings and the availability of other environmentally sound products as alternatives. The analysis should quantify the benefits to consumers in terms of convenience, safety and sanitation. Any such attempt to ban or restrict products likely will generate significant controversy due to the numerous factors to be considered; may delay implementation of other, more important components of solid waste management programs; and, probably, ultimately would have only a minor impact on reduction of solid waste volume and toxicity at high costs to consumers. If future debate of volume reduction includes discussion of product bans, SPI would note for the record that the use of plastics is volume "source" reduction because a smaller quantity of plastic is required in relation to other materials for many purposes.

SPI supports the statement, "Congress further establishes as a national goal the recycling of waste to the maximum extent consistent with market demand for recycled materials, and the creation and strengthening of markets for recycled materials." It is prudent to recognize and acknowledge the critical role of market demand in an effective recycling policy.

Section 104 Definitions

SPI is concerned with the definition of "municipal waste incineration unit" in (14) and of "new municipal waste incineration unit (15)." We believe these definitions are overly broad and would include many industrial boilers and industrial furnaces that burn non-hazardous wastes for energy . These facilities are fundamentally different from municipal incinerators, which use solid waste as the principal fuel source and therefore should not be subject to municipal incinerator recovery regulations.

A substantial number of terms throughout the bill are not defined and should be included in the definitions section. For example, Section 204 would require that leaching tests of incinerator ash be performed under "acidic and native conditions." Both acidic and native conditions should be defined in the definitions section, and provide that EPA prescribe the test methodology.

TITLE II - SOLID WASTE MANAGEMENT

Section 201 Objectives of Subtitle

SPI generally supports the regulatory framework that would be established whereby EPA promulgates national guidelines, which are then incorporated into permits issued by the states, with federal oversight. However, the schedule established is overly ambitious for both the development of guidelines and the issuance of permits. We are concerned that if enacted, Congress would be mandating schedules that probably cannot be met.

Section 201 (b) (4)

This or any other legislative proposal must recognize the wide variability that exists in municipalities and states and to that end should not prescribe a priority ranking of solid waste management technologies. In this section, therefore, "an integrated waste management hierarchy" shoud be deleted and be replaced with "a variety of waste management options..."

Section 202 (e) State and Regional Planning

A requirement that the states "identify the amount of solid wastes by waste type...that are (sic) reasonably expected to be generated...during the ensuing 20 year period, and shall identify the volumes to be reduced through source reduction and recycling..." may in theory be an excellent management tool, but in practice probably will be extremely difficult. There are many variables influencing the amount of waste generated, including the fact that recycling levels are tied to fluctuations in supply and demand. A more sound approach to this issue would be a requirement to estimate or project the amount, such as "...shall estimate to the extent practicable the volume..."

Section 203 Permits for Disposal of Solid Waste

A one-year timetable for permitting is unrealistic. States should develop and publish permitting procedures. Industries should apply for permits, and states should review applications. Public notice and opportunity for public hearing must be given for each application. With many permit applications being filed in a short time period, states would not have the manpower to expedite the process to meet the timetable in this section.

Section 204 (d) Municipal Incinerator Emissions

If Congress decides that incinerator emissions pose a threat to human health and the environment, those emissions should be regulated under existing provisions of the Clean Air Act. Incinerator emissions standards should be set at levels that are scientifically and technologically justifiable. The use of arbitrarily mandated limits that have not undergone formal rulemaking and have not been subjected to scientific scrutiny is inappropriate and unwise.

Section 204 (h) Surface Impoundments

This provision would change the federal policy direction with regard to surface impoundments. To meet the mandate of the Clean Water Act and to comply with its regulations, most industrial plants installed expensive waste water treatment systems in the 1970s at a cost of billions of dollars. The vast majority of these systems employ surface impoundments. This provision would mandate that these systems be replaced regardless of the hazard posed by the waste being managed.

Section 205 (e) Federal Enforcement - Criminal Penalty

This provision states "any person who knowingly or willfully violates..."Other statutes which incorporate this phrase use the word "and" rather than "or." We assume this is a drafting error because it sets up an unjustified, far more stringent, standard than that generally applicable.

Section 206 Waste Export

We support the exemption in section 206 (a) for material exported for recycling identified under United States tariff codes as secondary recovery materials because, at this time, such post consumer, post-institutional and post-industrial plastic is being shipped for reprocessing overseas.

TITLE III - WASTE REDUCTION AND RECYCLING ACT OF 1988

Section 301 Waste Reduction and Recycling Goals

SPI agrees that hazardous waste reduction is an effective means to provide environmental protection, and we recognize that it is an integral part of current regulatory policy. We support efforts to enhance waste minimization on a voluntary basis and thus support many of the waste reduction provisions such as state assistance, data base development, technical assistance grants and the establishment of an information clearinghouse.

There is a need for better definition of the terms used in discussing waste minimization. The federal government's role is more properly to establish uniform definitions and thus a consistent basis for evaluating performance in waste minimization, rather than to set performance standards.

We think the goal outlined in Section 301 (a) (1) to establish a uniform national performance efficiency standard for the industrial sector for hazardous residuals to not exceed 5 percent of production throughput is not practical or equitable. It should be recognized that it is in a manufacturer's best interest to use materials as efficiently as possible. Also, it should be recognized that manufacturing processes vary significantly. We do not believe that an equitable standard could be developed that could apply across the broad spectrum of manufacturing. A single standard is simply inappropriate and perhaps even meaningless; for example, the manufacture of certain materials in the plastics industry at this time would meet such a standard, while the manufacture of other materials would not be able to meet such a standard.

Also, the term "hazardous residuals" in section 301 (a) (1) should be added to the "definitons" section. We question, for example, how this would relate to a waste stream consisting of a low concentration (a few ppm or less than 1 percent) of a Section 313 toxic substance.

Again, we urge that it be acknowledged that marketplace competitive issues naturally drive industry toward waste minimization, along with other factors such as SARA Title III Section 313 reporting (which draws a negative public reaction) and the increased liability of waste disposal.

Section 302 Office of Waste Minimization

EPA recently has established a waste minimization office within the Office of Policy, Planning and Evaluation. This provision would seem to duplicate that effort.

Section 305 Hazardous Substances Efficiency Standard

The efficiency standard in this proposal relies on a "mass balance" concept. In 1986 Congress called for a mass balance study by the National Research Council. This study is due early 1989. We believe the study should be reviewed and that S 2773 be modified accordingly.

Section 305 (b) (1) Continuous Monitoring

SPI opposes the broad requirement for "continuous emission and environmental monitoring equipment..." Reliable instrumentation for continuous monitoring simply does not exist for many releases. In addition to being technically infeasible, such monitoring is not practical. Also, its need has not been demonstrated.

If continuous monitoring is an attempt to improve data collection, it is not technologically feasible; if it is an attempt to improve enforcement of Section 313 reporting, then it is a poor substitute for increased EPA enforcement of current law. At this point it is premature to consider requiring more data before the value of the Section 313 data is understood.

Section 307 National Packaging Institute

SPI appreciates the purposes of the institute outlined under (b) such as to maximize recycling and to reduce litter but we do not believe that the requirement for its establishment is necessary. Industry does respond to demonstrated needs. For example, SPI recently developed a voluntary container coding system to enhance plastics recycling. Also, over the last year and a half we have developed a public education program jointly with an environmental organization and an agency of the federal government to heighten the public's awareness of the problems d with improper disposal of products. To enhance plastics recycling, the ind hed four years ago the Plastics Recycling Foundation.

We support the establishment ouse to disseminate information on solid waste technologies and to provide stance to states and communities in these areas.

We do not believe that it is the role of government or environmental organizations to become "experts" in the complexities of package engineering and design. The plastics industry is beginning to factor recycling and waste reduction into the multitude of variables that go into successful package design. We believe that packaging does in fact reduce waste in many instances by preventing breakage, extending shelf life, reducing product spoilage, etc. Packaging, however, must be designed to meet certain specifications, sometimes including theft reduction, minimization of manpower requirements for the retailer, tamper evidence, etc.

Section 309 Federal Contracts/Section 311 Federal Procurement

SPI does not have a position at this time as to whether it is appropriate for the federal government to have a role in developing markets for any recycled product or whether the federal government should subsidize any products. SPI hopes to provide a position on these issues when the Congressional RCRA debate resumes. SPI recognizes that the development of markets for recycled products is critical to the success of recycling efforts. The free market should be adequate to respond to these goals. In recycling discussions, SPI has pointed out that adequate collection is a critical issue as is the need for markets. If recycling is to be increased, it is most important to develop methods to help states and municipalities increase the collection of recyclables as well as separate them at reprocessing or separation centers.

Section 310 Hazardous Constituents in Products

This section should be deleted from the bill. We question the approach in this bill to require both front-end and back-end controls, i.e., to control what goes into a product as well as to control product disposal. Overall, we support the goal of introducing fewer toxics into the environment. It would seem that controls at one end or the other is sufficient, but not both ends.

This bill requires treatment and disposal controls on the basis of protection of "human health and the environment;" therefore, the front-end controls requiring the elimination of certain substances from products are not necessary nor are they generally feasible. There is also the basic question of whether the substitute substances would be more or less environmentally sound.

To the extent existing national guidelines and standards are not adequate, TSCA section 6 is adequate to allow EPA to impose additional controls where required beyond this Act.

It is inappropriate to arbitrarily require a yearly "hit" list of 10 products, thereby subjecting them to this stigma without any criteria or rational basis for choosing the products. This provision would impose a cost on society without a commensurate benefit.

Section 311 (b) (3) Federal Procurement

SPI has two concerns with regard to this particular provision: While we applaud the recognition that "unless such items are not available at a reasonable cost and of adequate quality," SPI thinks that before a mandated number such as 50 percent is required, EPA should conduct a thorough study of recycled content in all materials - paper, plastics, steel, glass and aluminum. Markets for recycled materials are tied to fluctuations in the free market economy, and it would be premature to think that a 50 percent recycled content product always will be available. Further, unlike certain other recyled materials, plastics are more commonly not recyled into the same type product. For example, the two-liter soft drink PET (polyethylene terapthalate) bottle is most typically recycled back into fiber used for carpet facing and for fiber fill. A mandatory recycled content standard would discriminate against this type of recycling.

TITLE IV - WASTE MINIMIZATION REVENUE ACT OF 1988

Section 402 Imposition of Fees

SPI does not have an official position on this issue at this time. We hope to provide one when the RCRA debate resumes next year. We do, however, have some questions and concerns regarding such a tax. Although packaging represents approximately 30 percent of the solid waste stream, it would be inequitable, if determined that a tax or fee is necessary, to apply the tax to only a portion of the waste stream.

SPI appreciates the opportunity to provide comments on S 2773 for the hearing record. We look forward to working with committee staff and to providing additional comments and recommendations on these issues.

Sincerely,

Margaret Rogers
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